

June 17, 2013

Mary Dyas
Compliance Project Manager
Siting, Transmission and Environmental Protection Division
California Energy Commission
1516 Ninth Street, MS-48
Sacramento, CA 95814-5512



**Subject: NEXTERA BLYTHE SOLAR ENERGY CENTER LLC'S RESPONSE TO
CEC STAFF DATA REQUEST SET 1 (1-19)
BLYTHE SOLAR POWER PROJECT AMENDMENT
DOCKET NO. (09-AFC-6C)**

Dear Ms. Dyas,

On behalf of NextEra Blythe Solar Energy Center, LLC, enclosed for filing with the California Energy Commission is the electronic version of **NEXTERA BLYTHE SOLAR ENERGY CENTER LLC'S RESPONSE TO CEC STAFF DATA REQUEST SET 1 (1-19)**, for the Blythe Solar Power Project Amendment (09-AFC-6C).

Sincerely,



Scott A. Galati
Counsel to NextEra Blythe Solar Energy Center, LLC

BLYTHE SOLAR POWER PROJECT (09-AFC-6C)

RESPONSES TO DATA REQUESTS – SET 1

Submitted by:

NextEra Blythe Solar Energy Center, LLC

Submitted to:

California Energy Commission

June 2013

Prepared by:



Technical Area: Biological Resources

BACKGROUND: NOISE IMPACTS FROM HYDRAULIC RAM

In the Revised Petition for Amendment (2.8.4 System Installation) (modified project), a hydraulic ram may be used to drive steel piles into the ground for the tracking support structures. The approved project's solar trough technology did not require this type of installation and therefore noise from this equipment was not evaluated.

DATA REQUEST:

1. Noise impacts from Hydraulic Ram. Please provide an isopleths map of noise levels in decibel (dB) from a hydraulic ram operating near the project boundary to 50 feet beyond boundary and 100 feet beyond boundary or until the dB level drops to <60 dB or lower from the edge of the boundary. Please include the distance it drops below 60dB.

DATA RESPONSE 1:

An isopleth map that shows the off-site noise levels from noise generated by operation of the hydraulic ram (pile driver) is provided in Attachment Data Response (DR) 1. A memorandum explaining the analysis of off-site noise from the pile driver is also provided in this Attachment. As shown on the map in Attachment DR 1, based on "worst case" assumptions for maximum noise levels and the location of pile driver use on photovoltaic (PV) panel posts near the property boundary, noise from the pile driver attenuates to 60 dB or below at a distance of approximately 800 feet from the edge of the solar layout near the project boundary.

The Approved Project's Conditions of Certification (COC) BIO-8 (#8) and BIO-16 were created to address the potential impacts of noise levels over 65 decibels acoustic (dBA) on nesting birds. Implementation of these COCs will address potential impacts from noise created by use of a hydraulic ram. Although this data request references noise levels less than 60 dB, the Applicant will adhere to the threshold of 65 dBA, as written in the COC. As indicated in Attachment DR 1, noise from the pile driver attenuates to 65 dB or below at a distance of approximately 440 feet from the edge of the solar layout near the project boundary.

It should be noted that use of the pile driver will be restricted near residences as set forth by Riverside County Ordinance No. 847, which is reflected in COC NOISE-6. The ordinance restricts loud construction noise (no specific noise levels) within one quarter-mile of a residence to certain daylight hours and not on Sundays or holidays. Since the use of the pile driver can easily be restricted to these daylight hours and days when working within ¼ mile of a residence, operation of the pile driver will comply with COC NOISE-6.

BACKGROUND: SPECIAL-STATUS PLANTS

In August and September 2012, surveys were conducted to determine the presence, distribution, and abundance of special-status late summer and early fall plants. Two additional species were found, Abrams' spurge (*Chamaesyce abramsiana*, Rare Plant Rank 2.2) and desert unicorn plant (*Proboscidea althaeifolia*, Rare Plant Rank 4). The Revised Petition for Amendment Table 5.1-1 (Special-Status Summer Annual Plants Observed within the Modified Project During 2012) shows the number of plants observed per unit and for the gen-tie route. From the approved project two special-status plants Las Animas colubrina and Harwood's milk-vetch were also documented.

DATA REQUESTS:

2. Map of Special-Status Plants. Please provide a figure of the approved project with an overlay of the modified project boundaries and include locations of Las animas colubrina, Harwood's milk-vetch, and Abrams' spurge. Please also provide the electronic files for all known special-status plant locations as shape or geodatabase files.

DATA RESPONSE 2:

Attachment DR 2 provides the requested information. A compact disc (CD) containing the geographic information system (GIS) files has been provided with this Data Response.

3. Impacts and Mitigation of all Special-Status Plants. Please provide impact acres and a discussion of the mitigation for Abrams' spurge, Las Animas colubrina, and Harwood's milk-vetch. Include population information for the modified project vs. approved project. Include indirect and direct impacts the changes in grading regime for the modified project would have on these species.

DATA RESPONSE 3:

Although the data request asked for impact acres of special-status plants, the data collected during surveys consists of individual plants or small groupings of plants, and it would be difficult accurately represent the number of impact acres for each plant species, primarily because there may be many acres between individual plant observations. Because of this, and to maintain consistency with the impact analysis in previous California Energy Commission (CEC) documents, the discussion below focuses on the number of individual plants impacted by the Project, as opposed to the number of acres.

Overall, the Modified Project will result in fewer direct impacts to special-status plants than the Approved Project due to the reduction in the size of the Project footprint. The reduction in the Project footprint would eliminate direct impacts to individuals that now fall outside the Project disturbance area. Regarding any change in impacts as a result of the change in grading regime, indirect impacts from dust and erosion have the potential to decrease with the implementation of vegetation mowing (versus mass-grading) because this technique leaves the plants' root systems in place. Root systems stabilize the soil, which will reduce the amount of fugitive dust generated by Project activities,

and reduce erosion from water and wind. The changes to the grading regime will also allow water to flow naturally across the site with no impacts on surface water flow upstream and negligible impacts downstream of the Project. In any event, the change in grading regime would, at worst, result in impacts to special-status plants within the Modified Project footprint that would be no worse than the impacts that would have resulted from the Approved Project in the same footprint.

The following provides a discussion on population information, impacts, and mitigation by species:

Las Animas colubrina (California Natural Diversity Database [CNDDDB] Rank S2S3.3): The Modified Project footprint will avoid the population of Las Animas colubrina located to the west that would have been included in the Approved Project, and all direct and indirect impacts to this species will be eliminated (See Attachment DR 2 and Table 1). There will be no indirect impacts from erosion or drainage because the population is upstream from the Modified Project. Indirect impacts from dust will be reduced with the change in grading plan because mowing would help suppress the amount of dust generated during construction. Consequently, no mitigation is required.

Harwood's Milk-vetch (CNDDDB Rank S2): The Modified Project footprint will eliminate direct impacts to seven Harwood's milk-vetch to the east of the Project than would have been in the Approved Project (see Attachment DR 2 and Table 1). Although the number of individuals directly impacted will decrease slightly, the overall direct and indirect impacts from construction and operation of the Modified Project would remain similar to what was analyzed for the Approved Project. The exception to this is that indirect impacts from alteration of drainage patterns and fugitive dust will be reduced due to the change in grading regime. This is because drainage will be allowed to flow naturally through the site, and because mowing would help suppress the amount of dust generated during construction. This is not an insignificant benefit because seeds are carried in the channels, which will facilitate continued connections between the onsite and offsite populations. All other potential impacts are the same as for the Approved Project. Mitigation for this species would be achieved through implementation of the Approved Project's COC BIO-19 which was written to address an even greater impact to this species associated with the larger footprint of the Approved Project.

Abrams' Spurge (CNDDDB Rank S2S3): More than 16,270 Abrams' spurge plants were observed during Summer/Fall 2012 surveys for late-blooming plants (see Attachment DR 2 and Table 1). Of these, approximately 2,121 are within the Modified Project footprint, all of which are within Unit 4 and will be directly impacted by the Modified Project. The remaining 14,000+ individuals are located outside of the Modified Project footprint; several individuals are northwest of the solar plant site and the remainder is along the linear facilities. The impacts are less than what the impacts would have been for the Approved Project since there were some plants found west of Unit 4. Although hydrology will be minimally affected with the Modified Project, the individuals located outside of the Modified Project footprint will not be affected at all by any modifications of natural drainage patterns because they are either upslope or along the linear facilities.

Indirect impacts on the individuals northwest of the solar plant site pertaining to dust are expected to be minimal because mowing would help suppress the amount of dust generated during construction. All other potential impacts are less than those identified for special-status plants for the Approved Project since the reduced footprint of the Modified Project would avoid plants that would have been within the Approved Project's footprint. Mitigation for this species would be achieved through implementation of the Approved Project's COC BIO-19 which was written to apply to this species in the event it was identified in summer/fall plant surveys and would have addressed an even greater impact associated with the larger footprint of the Approved Project.

Table 1. Special-status Plant Observations within the Modified Project vs. the Approved Project

Species	Number of Plants in Modified Project Footprint						Number of Plants in Approved Project Footprint
	Unit 1	Unit 2	Unit 3	Unit 4	Linear Facilities	Total	Total
Abrams' Spurge	0	0	0	>2,121	0	>2,121	2,185
Harwood's Milk-vetch	80	16	32	0	17	145	167
Las Animas Colubrina	0	0	0	0	0	0	77

BACKGROUND: VEGETATION AND STATE WATERS

In the approved project all vegetation was to be removed and the site graded. The Revised Petition to Amend (modified project) states that vegetation would be cleared from roadways, access ways, and where concrete foundations are used. Vegetation would be mowed as necessary in the remainder of the solar plant site. It also states that in selected areas, limited use of "disc and roll" and micrograding techniques may be used.

DATA REQUESTS:

4. Description of Impacts to all Vegetation Communities. Please describe in detail how the vegetation would be impacted by the changes in grading (e.g. mowing and micrograding). Include in your discussion, the percentage of vegetation removed for the modified project for the different vegetation removal techniques and percentage of vegetation that will not be removed (i.e. mowed). Also include the direct and indirect impacts to the vegetation communities.

DATA RESPONSE 4:

All vegetation within the solar plant site boundary will be modified to some extent. Within the solar plant site, approximately 3 percent could be cleared and/or graded, 6 percent could be micro-graded, 15 percent could be disc and rolled, and 76 percent will be mowed. The above percentages would be refined during final design. The following describes the different vegetation removal techniques and a description of how the vegetation will be effected.

Grading: The Approved Project design included mass grading of the entire solar site which would result in manipulation of topography and complete removal of vegetation, including root systems. For the Modified Project, large-scale grading will only be used in areas where site topography requires smoothing such as for external fence lines and roads or for panel installation safety reasons, or where grading is needed for the operations and maintenance building, switchyard, water treatment area, parking areas, and inverters. The reduction in mass grading from the Approved Project design is expected to reduce indirect impacts from fugitive dust and erosion, both on site and off site, by keeping a significant amount of plant root systems in place (see Mowing, below).

Micro-grading: This technique is also referred to as “isolated cut/fill.” In general, portions of the site would be contoured to a smooth grade; the macro-level topography and storm water drainage would remain unchanged. This technique would only be used in areas where existing grade cannot accommodate perimeter fencing, roads, or other equipment or structures or would present panel installation safety concerns. The impacts to vegetation would be the same as discussed for grading, above.

Disc and roll: This technique is based on conventional farming practices using tractors to till the soil, which helps level out low spots, and followed by drum rollers to compact the soil. This technique would only be used in areas that need minor grading. Using this technique, vegetation would be crushed and the root systems disturbed.

Mowing: Mowing is a form of vegetation control that can be used with PV technology because the terrain does not have to be graded to a certain slope. PV panels are different than solar trough because the panels are placed on posts and therefore there is more flexibility in the layout. Because of this flexibility, the terrain does not have to be extensively graded and the majority of vegetation can just be mowed. Mowing involves cutting the vegetation back such that the root systems are left in place. The Applicant has elected to use this technique because it helps to maintain soil stability, which helps control fugitive dust and erosion as well as maintain hydrologic functions. The vegetation will be permitted to regrow to a certain height and then will be mowed or trimmed periodically to reduce fire risk and shading of the panels. The onsite plants that re-grow from the roots after mowing will remain connected to outside populations via largely intact hydrology, mobile seed dispersers (e.g., birds, insects, granivorous rodents), and wind dispersal.

Direct and Indirect Impacts to Vegetation: As described above, the different vegetation removal techniques will have varied direct impacts to vegetation; however, the Applicant assumes that all vegetation within the solar plant site boundaries will be directly impacted and mitigated for accordingly per COC’s BIO 12, BIO-19, and BIO-22 in the Final Decision for the Approved Project. Indirect impacts to off-site vegetation from fugitive dust will be negligible, as will any downstream off-site impacts related to hydrological connectivity, because the Modified Project’s grading plan will allow water to flow naturally through the site.

5. Map of Vegetation Communities. Please provide a figure of the upland vegetation and other vegetation types for the approved project with an overlay of the modified project boundaries. Please also provide the electronic files for all known vegetation communities as shape or geodatabase files.

DATA RESPONSE 5:

Attachment DR 5 provides the requested information. A CD containing the GIS files has been provided with this Data Response.

6. Map of Ephemeral Drainages (State Jurisdictional Waters). Please provide a figure of all the ephemeral drainages (state jurisdictional waters) with an overlay of the modified project boundaries. Please also provide the electronic files for all known ephemeral drainage locations as shape or geodatabase files.

DATA RESPONSE 6:

Attachment DR 6 provides the requested information. A CD containing the GIS files has been provided with this Data Response.

7. Impacts to Ephemeral Drainages (State Jurisdictional Waters). Please provide a detailed explanation of how the change in grading (e.g. mowing and removal of vegetation in selected areas) of the modified project would directly and indirectly impact ephemeral drainages. Discussion should include effects on the drainages hydrology, vegetation and wildlife functions. Also include impacts to ephemeral drainages upstream, onsite, and downstream of the modified project including information on all impacts to ephemeral drainages that would result from placement of PV arrays from each of the following panel support systems: fixed tilt, single-axis tracking, and foundations.

DATA RESPONSE 7:

The primary purpose of maintaining the onsite drainage pattern (i.e., allowing surface water to flow naturally across the site) is to retain hydrological functions and reduce grading-related dust emissions, not to protect vegetation or wildlife habitat. The Project remains committed to mitigating impacts to vegetation and habitat as if all biological function of ephemeral drainages would be eliminated. However, the change in grading regime would, as compared to the Approved Project, reduce the impacts to ephemeral drainages within the site, reduce the indirect impacts downstream to negligible, and eliminate the indirect impacts upstream of the Modified Project. Table 2 provides a comparison of the effects on the hydrologic, vegetation, and wildlife functions for the Approved versus the Modified Project as a result of the revised grading regime.

Table 2. Comparison of Impacts to Hydrology, Vegetation, and Wildlife

Function	Approved Project	Modified Project
Hydrologic Functions	<ul style="list-style-type: none"> Complete and permanent loss of hydrologic geomorphic function over the entire site (6,831 acres, including linear facilities) Erosion of upstream unprotected channel banks resulting in headcutting Direct impacts to 593 acres of state-jurisdictional waters Indirect impacts to 133 acres of downstream state-jurisdictional waters due to loss of hydrologic connectivity 	<ul style="list-style-type: none"> Retaining general contours allows water to flow through site as it does currently, maintaining the hydrologic function Where mowed, vegetation root systems will be left in place which will help reduce water erosion No upstream erosion (i.e., headcutting) impacts Direct impacts to 253 acres of state-jurisdictional waters (reduced from 593 acres from Approved Project) Hydrologic modeling shows negligible difference in offsite flow resulting in negligible downstream impacts (AECOM 2013)¹
Vegetation Functions	<ul style="list-style-type: none"> Vegetation cleared by large-scale grading would result in complete loss of vegetation over the entire site (6,831 acres, including linear facilities) Downstream impacts to offsite vegetation from disruption of surface flow 	<ul style="list-style-type: none"> Vegetation will continue to function as a soil stabilizer, reducing fugitive dust and water and wind erosion Mowing and other forms of vegetation removal will reduce, but not eliminate, value to wildlife for food and shelter Plant species onsite will remain connected to outside populations via largely intact hydrology, mobile seed dispersers (e.g., birds, insects, granivorous rodents), and wind dispersal Hydrologic modeling shows negligible difference in offsite flow resulting in minimal downstream impacts to vegetation (AECOM 2013)¹ No upstream impacts
Wildlife Functions	<ul style="list-style-type: none"> Vegetation cleared by large-scale grading would result in complete loss of wildlife habitat over the entire site (6,831 acres, including linear facilities) Downstream impacts to offsite wildlife habitat from disruption of surface flow. 	<ul style="list-style-type: none"> Value of the habitat to wildlife is still expected to be significantly reduced due to surface disturbance and human presence Small mammals, lizards, and birds that can fit through or over the fence may continue to use the site where there is vegetation re-growth Hydrologic modeling shows negligible difference in offsite flow resulting in minimal downstream impacts to wildlife and their habitat (AECOM 2013)¹ No upstream impacts

¹ AECOM. 2013. Pre/Post-Development Hydrology Report. Blythe Solar Power Project, Riverside County, California. Prepared for NextEra Blythe Solar Energy Center, LLC. April.

Despite these reductions in impacts, the Applicant assumes that the surface and vegetation disturbance within the Modified Project footprint will substantially compromise the value of the habitat in the drainages. Therefore, the Applicant will mitigate according to the Approved Project's COC BIO-22 for the acres of state-jurisdictional water directly impacted by the Modified Project. Due to the reduction in Project footprint, direct impacts to state-jurisdictional drainages will be reduced to 253

acres (from 593 acres, see DR 6), and indirect impacts are no longer expected due to the elimination of the engineered drainage channels.

Although the revised grading regime will reduce the value of the site to wildlife, the remaining onsite vegetation may encourage small wildlife that can fit through the fence (small mammals, lizards, and birds) to continue to use the site, despite the disturbance and modified vegetation. These species will have full access through the chain link fence to populations outside of the Project. This is also true of plant species, which will be connected to outside populations via largely intact hydrology, mobile vectors (e.g., birds and insects), and wind dispersal. Potential impacts to wildlife that continue to use the Project during operations include injury or mortality due to ongoing operations and maintenance activities; however, the change in grading regime is expected to have fewer indirect impacts on small wildlife movement and connectivity of plant populations, resulting in a situation where species in general are less affected by the presence of the Modified Project than they would have been by the Approved Project.

No measurable impacts to ephemeral drainages are expected from the PV panel support structures. Only the panel support structures (i.e., posts) will be placed within drainages; the large inverters with concrete pads will be placed outside of the drainages. The Applicant will also avoid placing posts in particularly deep drainages, where possible. The posts will be 4-6 inches in diameter, placed approximately every 10-20 feet along the tracker rows, which will be approximately 34 feet apart. The posts are not expected to obstruct flow because this spacing, along with the post shape/dimensions will allow surface water and small debris to flow around the posts. Furthermore, there is no substantial difference between fixed tilt and single-access tracking support systems design or placement; therefore, no substantial difference in impacts on ephemeral drainages is expected. For these reasons, support structures are not expected to measurably affect the hydrological function of the drainages.

8. Impacts to Ephemeral Drainages (State Jurisdictional Waters). Please describe in detail how the reduction in grading will affect surface water flow through the site. In the description include how this change in the project would eliminate the need for diversion channels including how the change in grading impacts surface flow upstream and downstream of the site.

DATA RESPONSE 8:

The Approved Project would have required extensive cut and fill grading to provide flat surfaces to accommodate the solar thermal structures. The extensive grading associated with the Approved Project would result in significant rerouting of the natural flow paths and would require diversion channels to route flows around foundation elements and through the site. Because the natural contours would be generally preserved within the Modified Project, it is anticipated that the natural flow paths would also be generally retained, eliminating the need for diversion channels. Furthermore, the PV support structures associated with the Modified Project do not require diversion of surface water flows. Rather, surface water flows would be allowed to flow directly past the PV support structures along the natural flow paths.

As described in the Pre-/Post Development Hydrology Report (AECOM 2013), changes to surface water flows downstream of the Modified Project Site are anticipated to be negligible, therefore, no material impacts to surface water flows downstream of the site are expected. No aspect of the Modified Project would result in changes to surface water flows upstream of the site, therefore, no impacts to surface water flows upstream of the site would occur.

BACKGROUND: CONSTRUCTION IMPACTS

Construction impacts of the modified project are not discussed in the Revised Petition to Amend (modified project) and staff needs to understand how these impacts may change with the use of PV technology. For the approved project, staff analyzed the impacts of construction on plants and wildlife in terms of the following: direct mortality, injury, equipment, or roadways; habitat loss or habitat community degradation of vegetation through fugitive dust, introduction of invasive weeds; disruption of wildlife movement and gene flow; and disturbance by equipment from noise and vibration. The analysis of the modified project does not provide any information on construction impacts of the modified project on special-status plants, vegetation, wildlife, or habitat in comparison to the original project proceeding. Construction is expected to occur Monday thru Friday 7:00 am to 10:00 pm.

DATA REQUEST:

9. Please provide a discussion comparing the biological impacts of construction activities associated with PV technology to the construction impact analysis performed for the approved project using solar trough technology to burrowing owl, desert tortoise, Mojave fringe-toed lizard, golden eagle, Nelson's bighorn sheep, American badger, desert kit fox, bats, and special-status plant species. Specifically, please discuss potential impacts from direct mortality, injury, and equipment; habitat loss or habitat community degradation of vegetation through fugitive dust, introduction of invasive weeds; ephemeral drainage habitat changes; disturbance to nocturnal wildlife including bats from nighttime construction (e.g. lighting); and disturbance by equipment from noise and vibration. In addition, please provide any additional measures that would be implemented to minimize or avoid direct and indirect effects to these species and habitat during construction.

DATA RESPONSE 9:

Overall, the Modified Project's construction impacts to native species and drainage systems will be lower than the Approved Project because of the following:

- Substantially reduced Modified Project footprint by 2,761 acres (Approved Project – 6,831 acres; Modified Project – 4,070 acres; excludes linear facilities)
- Substantially decreased modifications to the ground surface
- Shorter construction schedule (reduced from 69 months for the Approved Project to up to 48 months for the Modified Project).

Despite the change in solar technology for the Modified Project, the heavy equipment, night lighting, and general process of construction are no different than for the Approved Project; there have been no changes to the linear facilities. The Modified Project presents no construction impacts, either direct or indirect, that have not been previously analyzed for the Approved Project, with the exception of noise impacts from use of the hydraulic ram, which is addressed in DR 1. Therefore, with minor revisions as proposed by the Applicant in the *BSPP Revised Petition for Amendment*, the COCs required for the Approved Project are relevant and applicable to the Modified Project and will be implemented by the Applicant. The one exception is BIO-21, Mitigation for Impacts to Bighorn Sheep, which the Applicant has requested be deleted (see *Revised Petition for Amendment* and below).

In addition, to address high flow storm events, the Applicant will revise the design of the perimeter fencing. With the elimination of the Approved Project's engineered drainage channels, the fence for the Modified Project will be designed such that sections of the fencing that cross deep washes and are subject to large storm flows will swing up to allow passage of debris and storm flows. The remainder of the fencing across the deep channels would be a frangible type of fence designed to break away when subject to extreme storm flows. This fencing would be designed for easy repair or replacement after the storm event to ensure that desert tortoise exclusion fencing can be repaired/replaced quickly. Fence inspections would be implemented as required by BIO-9 *Desert Tortoise Clearance Surveys and Fencing*, #1d.

The following discussion outlines any incremental change in potential construction-related impacts on the requested species from the Modified Project as compared to the Approved Project.

Burrowing owl: The Modified Project presents no construction impacts on burrowing owl, either direct or indirect, that have not been previously analyzed for the Approved Project. The Modified Project will reduce impacts to burrowing owl habitat by over 2,700 acres. Construction impacts from noise and vibration on burrowing owl will be less than the Approved Project, because the construction schedule has been shortened by up to 21 months for the Modified Project. The impacts from fugitive dust on burrowing owls and their habitat would be reduced due to the change in drainage plan as well.

Desert tortoise: The Modified Project presents no construction impacts on desert tortoise, either direct or indirect, that have not been previously analyzed for the Approved Project. The Modified Project will reduce impacts to desert tortoise habitat by over 2,700 acres, and moving the western boundary excluded the higher quality tortoise habitat closer to the mountains. Construction impacts from noise and vibration on desert tortoise will be less than the Approved Project, because the construction schedule has been shortened by up to 21 months for the Modified Project. The impacts from fugitive dust on tortoises and their habitat would be reduced due to the change in drainage plan as well.

Mojave fringe-toed lizard: There have been no changes to the linear facilities as part of the Modified Project; therefore, the Modified Project presents no construction impacts on Mojave fringe-toed lizard, either direct or indirect, that have not been previously analyzed for the Approved Project. The only Mojave fringe-toed lizard habitat present within the Project disturbance area is along the transmission line south of I-10.

Golden eagle: The Modified Project presents no construction impacts on golden eagles, either direct or indirect, that have not been previously analyzed for the Approved Project. The Modified Project boundary will have fewer potential impacts on golden eagles because it is farther from the closest potential eagle nesting habitat (McCoy Mountains) than the Approved Project, and the Modified Project's reduced footprint will impact over 2,700 fewer acres of potential foraging habitat.

Nelson's bighorn sheep: Any potential impacts to Nelson's bighorn sheep or their spring foraging habitat have been eliminated by moving the Project boundary at least 1 mile from the base of the McCoy Mountains. The 1-mile boundary was established by the resource agencies during permitting of the Blythe Solar Power Project (BSPP) as the distance from the base of the mountains to be considered for impacts to potential big horn sheep foraging habitat.

American badger: The Modified Project presents no construction impacts on badger, either direct or indirect, that have not been previously analyzed for the Approved Project. The Modified Project will reduce impacts to American badger habitat by over 2,700 acres. Construction impacts from noise and vibration on badger will be less than the Approved Project, because the construction schedule has been shortened by up to 21 months for the Modified Project. The impacts from fugitive dust on badgers and their habitat would be reduced due to the change in drainage plan as well.

Desert kit fox: The Modified Project will reduce impacts to kit fox habitat by over 2,700 acres. Construction impacts from noise and vibration on kit fox will be less than the Approved Project, because the construction schedule has been shortened by up to 21 months for the Modified Project. The impacts from fugitive dust on kit fox and their habitat would be reduced due to the change in drainage plan as well. Although the Modified Project presents no construction impacts on desert kit fox, either direct or indirect, that have not been previously analyzed for the Approved Project, recent developments in kit fox management have prompted suggested revisions to COC BIO-17 (see *BSPP Revised Petition for Amendment*).

Bats: The Modified Project presents no construction impacts on bats, either direct or indirect, that have not been previously analyzed for the Approved Project. Construction night lighting will be less than the Approved Project, because the construction schedule has been shortened by up to 21 months for the Modified Project.

Special-status plant species: The Modified Project presents no construction impacts on special-status plants, either direct or indirect, that have not been previously analyzed for the Approved Project. Changes in impacts on special-status plant species pertaining to

the revised grading regime are discussed in DR 3, above; there are no changes to special-status plant species along the linear facilities.

BACKGROUND: OPERATIONAL IMPACTS

Operational impacts of the modified project are not discussed in the Petition to Amend and staff needs to understand how these impacts may change with the use of PV technology. Staff analyzed operational impacts of the approved project on plants and wildlife in terms of the following: increased raven subsidies, operational noise, traffic, avian collision and electrocution, and glare/lighting.

DATA REQUESTS:

10. Please provide a comparison of the biological impacts of an operating PV power plant (modified project) and operation impact analysis performed for the approved project to burrowing owl, Mojave fringe-toed lizard, golden eagle, Nelson's bighorn sheep, and special-status plant species. Specifically, please discuss potential impacts from long-term maintenance activities associated with PV power plants such as increase raven subsidies, operational noise, traffic, avian collision and electrocution with PV equipment and other associated facilities, and glare/lighting from reflected light on nearby vegetation and habitat. Please also provide any additional measures that would be implemented to minimize or avoid direct and indirect effects to these species and habitat during operation.

DATA RESPONSE 10:

Overall, the Modified Project's impacts on biological resources during operations will be reduced compared to the Approved Project for the reasons listed below; a summary is presented in Table 3. Although the Modified Project's impacts during operations have been reduced, the COCs required for the Approved Project are still relevant and applicable to the Modified Project and will be implemented by the Applicant.

- There will be fewer raven subsidies due to a decrease in workforce (i.e., reduction in food trash), fewer perching opportunities due to the reduction in Project size, and fewer evaporation ponds (two evaporation ponds for the Modified Project versus eight for the Approved Project).
- The mirror washing schedule has been reduced from weekly for the Approved Project to quarterly for the Modified Project, resulting in less water use and reduced Project activity.
- Noise will be reduced because tracking motors are significantly less noisy than the steam turbine and air cooled condenser that were part of the Approved Project.
- Traffic will be reduced because the operations workforce will be reduced from 221 workers for the Approved Project to between 15 and 20 for the Modified Project.
- Glint and glare is substantially less than the Approved Project due to the elimination of the reflective mirrors (see *BSPP Revised Petition for Amendment*).

- Night lighting would be similar or less for the Approved Project because lighting will still be shielded and oriented to reduce night time illumination. The Approved Project would have needed night lighting on the cooling towers, which the Modified Project won't have.
- Potential avian collision with tall structures will be reduced due to the elimination of the 120-foot-tall cooling tower.

Table 3. Comparison of Operational Impacts on Wildlife and Plants

Species	Impacts Less Than Approved Project?				
	Noise	Traffic	Avian Collision/ Electrocution	Glare/Lighting	Mirror Washing
Burrowing Owl	Yes	Yes	Yes	Yes	Yes
Mojave Fringe-toed Lizard	Same as Approved Project	Same as Approved Project	Same as Approved Project	Same as Approved Project	Same as Approved Project
Golden Eagle	Yes	Yes	Yes	Yes	Yes
Bighorn Sheep	Impact Eliminated	Impact Eliminated	N/A	Impact Eliminated	N/A
Special-status Plants	N/A	Yes	N/A	N/A	Yes

The Modified Project presents no operations impacts, either direct or indirect, that have not been previously analyzed for the Approved Project, with the exception of periodic mowing of vegetation. Mowing would not likely have occurred in the Approved Project because the entire site would have been graded and all vegetation destroyed. Mowing is necessary during operations of the Modified Project to decrease risk of fire and prevent shading of the panels. All vegetation underneath the panels would be managed via either mechanical mowing/trimming or with a Bureau of Land Management-approved herbicide (see *Revised Petition for Amendment* for details). Periodic mowing is likely to result in disturbance and some losses of primarily above-ground vertebrates, although nesting birds will be avoided by mowing outside the nesting season.

Technical Area: Hazardous Materials Management

BACKGROUND

As an option to supply potable water for use at the site, the project may decide to treat groundwater on site by using either a trailer-mounted, totally enclosed and self-contained water treatment system or a free-standing treatment facility. If a free-standing facility is chosen, various water treatment chemicals including biocides, scale inhibitors, etc., might be used. These chemicals are not listed in the Revised Petition for Amendment (April 2013) in Table 2-7. Also, scale inhibitors and algae control chemicals for control of corrosion and biological build-up in the reverse osmosis equipment and pipes might also be used. These also are not listed in Table 2-7. Many of the chemicals in use today for these purposes are highly toxic and/or corrosive. To adequately assess the potential impacts to workers and the off-site public due to the transportation, storage, and use of these chemicals, staff needs to know their identity.

DATA REQUESTS

11. Please identify by name, Chemical Abstracts Service (CAS) number, concentration, and maximum amount to be stored on site, each chemical that might be or would be used in the water treatment facility, including biocides, scale inhibitors, and chemicals to control algae.

DATA RESPONSE 11:

Table 4 lists the estimated chemical requirements for the demineralized water treatment system.

Table 4. Estimated Chemical Requirements

Name	CAS No.	Concentration	Quantity Stored	Storage Type
Sulfuric Acid (H ₂ SO ₄)	7664-93-9	93%	1,000 gallon	4 x 250 gallon totes
Caustic (NaOH)	1310-73-2	50%	1,000 gallon	4 x 250 gallon totes
Anti-Scalant	Varies	Varies	500 gallon	2 x 250 gallon totes
Biocide			500 gallon	2 x 250 gallon totes
Magnesium Nitrate	10377-60-3	1-5%		
5-Chloro-2-Methyl-4-Isothiazolin-3-one	26172-55-4	1-5%		
2-Methyl-4-Isothiazolin-3-one	2682-20-4	0.1-1%		
Corrosion Inhibitor	Varies	Varies	500 gallon	2 x 250 gallon totes

Notes:

1. Anti-Scalant varies greatly between suppliers. Nalco PermaTreat PC-191T is a RO anti-scalant that is deemed non-hazardous according to the Material Safety Data Sheet (MSDS).
2. Biocide shown is Nalco 7330. Magnesium Nitrate is predominant base (see other MSDS examples attached), but concentration can change between suppliers.
3. Corrosion inhibitors are a blend, often proprietary. Actual concentrations cannot be known at this time.
4. Volumes are based on 20 gallons per minute demand.
5. RO membranes, if used, are assumed to be shipped off-site for cleaning.

Technical Area: Public Health

BACKGROUND

Construction Health Risk Assessment

In the Public Health section of the Revised Petition for Amendment, the cancer risk over a four-year period from diesel particulate matter (DPM) emissions was calculated based on the Revised Technical Support Document for Exposure Assessment and Stochastic Analysis (OEHHA 2012). The cancer risk due to construction of the modified project was summarized in Table 4.3-1, and the Excel file of risk calculation (E.3 BSPP Screening Health Risk Assessment (HRA) Results 040113.xlsx) was also provided by the applicant. Staff needs an explanation for the applicant's choices in calculating construction cancer risk.

DATA REQUEST

12. According to E.3 BSPP Screening HRA Results 040113.xlsx, the construction cancer risk was the sum of the risks of the "Cancer Risk for Resident Child up to 2 Years Old" and "Cancer Risk for Resident Child 2 to 15 Years Old". Please explain:
 - a. Why did the applicant calculate the risk for children in particular?
 - b. Why did the applicant sum up the risk of children up to 15 years? What is the reference for such an age range for children?
 - c. Which sections or pages of the Revised Technical Support Document for Exposure Assessment and Stochastic Analysis (OEHHA 2012) was this calculation based on?

DATA RESPONSE 12:

- a. Cancer risk for children was calculated in order to ensure that the analysis is conservative. The Daily Breathing Rate for children (581 liters per kilogram [L/kg] of body weight) is higher than that for adults (95th percentile of 302 L/kg of body weight). As this is a short-term (up to 4 year) construction project, a child with a higher breathing rate would inhale a greater amount of DPM than an adult. Therefore, the results of the calculations used in the HRA are a conservative estimate of cancer risk. The cancer risk for adults would be lower than the cancer risk for children as discussed in the Technical Support Document for Cancer Potency Factors (OEHHA 2009).
- b. The title of the analysis results in E.3 BSPP Screening HRA Results 040113.xlsx should read "*Cancer Risk for Resident Child 2 to 16 Years Old*" (not 15). The Revised Technical Support Document for Exposure Assessment and Stochastic Analysis (OEHHA 2012) divides the age groups by sensitivity factors (ASF) of 10 for children up to 2 years old and 3 for children 2 to 16 years old. Children up to 2 years old are most sensitive (multiplication factor of 10 in the numerator of the

risk calculation) and children from 2 to 16 years old are slightly less sensitive (multiplication factor of 3 in the numerator of the risk calculation).

- c. Equations 3-1 and 3-2 on pages 3-7 and 3-8 of the Revised Technical Support Document for Exposure Assessment and Stochastic Analysis (OEHHA 2012) are for calculating cancer risk based on age groups.

Technical Area: Soil and Water Resources

BACKGROUND

In the approved project, the site was going to be graded relatively flat for the placement of the supports for the parabolic trough system. Also, flows were going to be routed away from the site and therefore the potential for erosion across the site would be mitigated. For the amended project, the site would not be extensively graded and flows would be allowed to go through the site, mostly maintaining natural conditions.

There are three main washes, known as the North, Central, and South washes that cross the site of the amended project. Even though the owner did not give specific information regarding the placement of solar panel foundations in the washes, it is likely that panels will end up being installed in the washes. Placement of panels in the washes has the potential to adversely affect flow conditions in the washes. Consequently, erosion and local scour are likely to increase. The owner has not addressed these impacts in the amended application, nor did it address plans to prevent potential increases in erosion and local scour. Staff would like to see a map showing the approximate locations of panel foundations that would be placed in the washes. Also, staff needs information on the measures the owner proposes to control any increases in erosion and local scour. Staff, however, does not have an issue with the design event that was used to design drainage elements for the site which followed standard practice of using the 100-year 24-hour storm event.

SCOUR AND EROSION

DATA REQUESTS

13. Please provide a map with an appropriate scale that shows the approximate number and locations of panel foundations that would be placed in the washes that cross the site.

DATA RESPONSE 13:

Until the project is in final design, it is not possible to provide a map showing the approximate number and locations of panel foundations that would be placed in the washes that cross the site. However, we believe that in the responses to Data Requests 14 and 15, we are providing CEC Staff with the information they are seeking related to how water flowing through the site could compromise panel foundation and/or the stability and reliability of the panels, as well as the appropriate mitigation measures. To assist CEC Staff in their analysis of scour/erosion impacts on panels, maps showing the maximum scour depth and velocity across the site during the 100 year storm have been provided in the Scour and Erosion Analysis in Attachment DR 14.

14. Please provide an analysis showing how much scour might be expected along panel foundations in the washes.

DATA RESPONSE 14:

The requested analysis is provided in Attachment DR 14.

15. Please identify the measures that would be taken to mitigate any erosion impacts that would compromise the stability and reliability of the panels.

DATA RESPONSE 15:

In addition to this data request (DR 15), Staff's Issues Identification Report (May 29, 2013) identified that a construction Storm Water Pollution Prevention Plan (SWPPP) has not yet been submitted. Staff's Issues Identification Report indicated that such a document is needed to assess potential impacts of the Modified BSPP. Therefore, in order to respond to DR 15 and to Staff's concern contained in the Issues Identification Report, a draft of the Drainage, Erosion, and Sediment Control Plan (DESCP) (as opposed to a SWPPP) is provided in Attachment DR 15 since COC Soil&Water-1 requires a DESCP, not a SWPPP

The draft DESCP contained in Attachment DR 15 includes a number of Best Management Practices (BMPs) that will be used to minimize scour and erosion at the BSPP during storm events. The Scour Analysis provided in Attachment DR 14 indicates that scour on the BSPP site is expected to be minimal. Implementation of the BMPs identified in Attachment DR 15 will mitigate potential erosion impacts that could compromise the stability and reliability of the panels.

REVISED REPORT OF WASTE DISCHARGE

15-S: IIDR Data Request. *Staff's Issues Identification Report for BSPP (May 29, 2013) indicated the following: "The Modified BSPP would eliminate the use of HTF and reduce the amount of process waste water compared to the Approved BSPP. As a result, the Modified BSPP would reduce the number of evaporation ponds, from eight 4-acre to two 6-acre evaporation ponds. Although this would be a reduction of impacts, it would require revised Waste Discharge Requirements (WDRs) to reflect the Modified BSPP. This process must be coordinated with the Colorado River Basin Regional Water Quality Control Board (CRBRWQCB)."*

IIDR DATA RESPONSE 15-S:

The Revised Petition to Amend (PTA) the BSPP was submitted in April 2013. Appendix H of the PTA contained the WDR Facts, Requirements and Monitoring/Reporting Program (Appendices B, C and D respectively in the Final Decision) issued by the Commission for the Approved Project, but with the changes proposed to reflect the Modified Project. The changes needed to these WDRs were relatively minor. The design of the evaporation ponds remains unchanged although the size is reduced. The characteristics of the waste discharge remain similar although the quantity of waste is significantly reduced. Additionally, the WDRs issued for the

Approved Project also covered the Land Treatment Units for use in handling any leaks of Terminol, and the PTA requested that those WDRs be deleted since the use of Terminol, and hence Land Treatment Units, are no longer needed.

In order to obtain CRBRWQCB's opinion on the adequacy of the revised WDRs as presented in the PTA for the Modified Project, a Report of Waste Discharge (ROWD) Amendment Application has been prepared and is contained in Attachment DR 15-S. This amended ROWD has also been submitted to the CRBRWQCB simultaneously with the submittal of these responses to Data Requests Set 1. Prior to submittal, AECOM contacted Herb Jackson of the CRBRWQCB to discuss the application. Mr. Jackson agreed in concept with the proposed format for the attached amendment, including providing a mark-up of the WDRs for the Approved Project to demonstrate the changes anticipated for the Modified Project.

Technical Area: Transmission System Engineering

BACKGROUND

Staff needs to determine if the modified project will be in conformance with the existing Phase I and Phase II generator and interconnection.

DATA REQUEST:

16. Please provide written confirmation from the California Independent System Operator (ISO) that the existing Phase I and Phase II generator interconnection studies are applicable to the change of technology, new plant configuration, and on-line date. If the California ISO reports that the Phase I and/or Phase II Interconnection Studies would need to be updated, please provide the studies updated for the modified project.

DATA RESPONSE 16:

A letter from the California ISO to NextEra dated December 20th, 2012 and a letter from NextEra to the California ISO dated December 31, 2012 are included in Attachment DR 16. The letters demonstrate an understanding by the California ISO that the project technology and size has been modified.

17. Provide a detailed one-line diagram for the Colorado River Substation after addition of the modified project.
 - a. Show the bay arrangement and the necessary equipment required to interconnect the modified project.
 - b. Provide the ratings of the breakers, disconnect switches, relays, buses, etc.

DATA RESPONSE 17:

The Colorado River Substation is being built by Southern California Edison (SCE). As such, SCE is in possession of the engineering details of the Colorado River Substation. However, NextEra Blythe Solar Energy Center, LLC (NextEra Blythe Solar) did request this information from SCE and a simple one-line diagram was provided. Attachment DR 17 contains the one-line diagram from SCE.

Technical Area: Waste Management

BACKGROUND

The Final Energy Commission Decision for the approved Blythe Solar Power Project was issued September 15, 2010. The Phase I Environmental Site Assessment (ESA) presented in the Application for Certification for the approved project was completed in May 2009.

In 2002, the United States Environmental Protection Agency (EPA) was charged under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) to establish by rule the “generally accepted good commercial and customary standards and practices” that had to be followed by a party seeking immunity from property contamination liability. The American Society for Testing and Materials (ASTM) established method ASTM 1527-05 (Standard Practice for Environmental Site Assessments) to provide procedures for conducting investigations to adequately evaluate the potential for a site to contain contamination. The EPA adopted the ASTM procedures and, after November 1, 2006, buyers and sellers of real estate were compelled to either comply with the requirements of the Environmental Protection Agency’s “All Appropriate Inquiry Rule,” or follow the standards set forth in the ASTM E1527-05 Phase I Environmental Site Assessment Process, to satisfy the statutory requirements for conducting all appropriate inquiries.

In ASTM E 1527-05, provisions for updating an existing ESA are provided. According to ASTM E 1527-05, Section 4.6, *Continued Viability of Environmental Site Assessment*, and Section 6, *User’s Responsibility*, updating the ESA is required within a year if a new project is proposed for the property on which the initial ESA was prepared.

Specifically, Section 4.6 of ASTM E 1527 states:

4.6 *Continued Viability of Environmental Site Assessment*—Subject to Section 4.8, an *environmental site assessment* meeting or exceeding this practice and completed less than 180 days prior to the date of acquisition of the *property* or (for transactions not involving an acquisition) the date of the intended transaction is presumed to be valid. If within this period the assessment will be used by a different *user* than the *user* for whom the assessment was originally prepared, the subsequent *user* must also satisfy the User’s Responsibilities in Section 6.

Subject to Section 4.8 and the User’s Responsibilities set forth in Section 6, an *environmental site assessment* meeting or exceeding this practice and for which the information was collected or updated within one year prior to the date of acquisition of the *property* or (for transactions not involving an acquisition) the date of the intended transaction may be used provided that the following components of the inquiries were conducted or updated within 180 days of the date of purchase or the date of the intended transaction:

- (i) *interviews with owners, operators, and occupants;*

- (ii) searches for recorded environmental cleanup liens;
- (iii) reviews of federal, tribal, state, and local government records;
- (iv) visual inspections of the *property* and of *adjoining properties*; and
- (v) the declaration by the *environmental professional* responsible for the assessment or update.

In summary ASTM E1527-05 states:

1. An ESA meeting or exceeding E 1527 is presumed to be valid if "completed less than 180 days prior to the date of acquisition."
2. An ESA for which information was collected or updated within one year prior to the date of acquisition may be used as long as the following components were collected or updated within 180 days of the date of intended acquisition: interviews with owners, operators and occupants; searches for environmental cleanup liens; review of federal, tribal, state, and local government records; visual inspections of the subject property and adjacent properties; and a declaration by the environmental professional (EP) for the assessment or update.
3. A Phase I ESA that is older than one year may be used as a "prior assessment" reference. The older historical data is history (unchangeable), and therefore it is valid and can be used. This includes such data as fire insurance maps, historical topographic maps, historical street directories, and aerial photos.

The Phase I Environmental Site Assessment prepared for the approved project has not been updated in over five years. Staff needs an ESA for the modified project that is currently valid with respect to completion date and testing standards.

DATA REQUEST

18. In accordance with requirements stated in ASTM E 1527-05, please provide an updated Phase I ESA that describes the proposed project site and existing site conditions and identifies any new Recognized Environmental Conditions in accordance with the previously indicated testing standard.

DATA RESPONSE 18:

The Staff's background to this Data Request includes information about the requirements of ASTM E 1527-05 as it relates to property transactions. NextEra Blythe Solar is seeking to amend the Right-of-Way grant from the Bureau of Land Management for the Modified Project, and hence these standards for protection from property contamination liability are not applicable to BSPP. However, a Phase I ESA does provide information on soil contamination and other environmental conditions that may be useful for the evaluation of environmental impacts and worker safety under CEQA. Therefore, an updated Phase I ESA, conducted in compliance with ASTM E 1527-05, is provided in Attachment DR 18 in response to this request.

AECOM conducted a Phase I ESA¹ of the proposed solar plant site for the previous BSPP applicant (Palo Verde Solar I, LLC, formerly known as Solar Millennium, LLC) in March 2009. No recognized environmental conditions (REC) or historic RECs were identified by AECOM in connection with the subject property of approximately 11,000 acres at that time. One *de minimis* condition of miscellaneous trash and debris (e.g., household dumping) was observed at various locations on the subject property and surrounding area. No hazardous waste was observed on the subject property during AECOM's site visit. In addition, the presence of unexploded ordinance (UXO) related to the World War II era use of the site as a military training area was identified in the 2009 Phase I ESA as a non-ASTM environmental concern.

In January 2011, Tetra Tech EC, Inc. conducted a Phase I ESA for NextEra Energy Resources, LLC of the McCoy Solar Energy Project (MSEP). MSEP is located immediately north of BSPP and this 2011 Phase I ESA included the generation tie (gen-tie) line corridor for MSEP to the Colorado River Substation much of which is shared with BSPP. The findings of the 2011 Phase I ESA for MSEP were the same as the 2009 Phase I ESA for BSPP, i.e., no identified RECs, *de minimis* conditions related to trash and debris, and a non-ASTM concern related to the potential presence of UXO in the area.

As detailed in Attachment DR 18, AECOM conducted a Phase I ESA in June 2013 of the approximately 4,070 acre site proposed for BSPP (entirely within the footprint of the previous much larger site), as well as the access road, gen-tie corridor to the CRS, and the distribution line corridor to the east of the site. The findings of the recent 2013 Phase I ESA for BSPP were the same as the Phase I ESAs done for BSPP in 2009 and MSEP in 2011, i.e., no identified RECs, *de minimis* conditions related to trash and debris, and a non-ASTM concern related to the potential presence of UXO in the area.

¹ AECOM, May 2009. Provided as Appendix I of the Blythe Solar Power Project Application for Certification, August 2009. CEC Docket 09-AFC-6.

Technical Area: Worker Safety/Fire Protection

BACKGROUND

The modified project would consist of a very large number of solar PV panels, wire, and capacitors. This array can potentially subject workers to routine electrical hazards. Additionally, in the event of a fire involving solar PV panels, their connecting wires, and/or their capacitors, both on-site workers and emergency response personnel may be subject to electrical shock hazards of sufficient magnitude to cause serious injury or death. Since cutting the circuits does not result in a de-energized solar panel (which can remain energized for up to 72 hours in the dark), these hazards are real and difficult to address.

The applicant is proposing to address safety procedures to prevent accidental electrocutions in an Emergency Action Plan as part of a proposed revision to Condition of Certification **WORKER SAFETY-2**. However, to adequately assess the potential impacts to workers and emergency responders, staff needs to know what safety measures are being proposed prior to the Commission's consideration of this amendment to ensure that workers and first responders are adequately protected.

DATA REQUESTS

19. Please identify safety measures, including engineering controls and administrative controls (Best Management Practices) that will be implemented to protect workers and emergency responders when a fire or other event that necessitates a response occurs that involves solar panels.

DATA RESPONSE 19:

The key features of the engineering and administrative controls that will be included in the BSPP design and emergency action plan are described in the following paragraphs.

Engineering controls will be put in place according to all applicable codes and standards such as the California Building Code (CBC), National Fire Protection Association (NFPA), and the Solar Photovoltaic Installation Guideline by the California Department of Forestry and Fire Protection to ensure that the most current standards are utilized for fire protection equipment and materials.

As shown on the layout in Attachment DR 19-1, emergency egress will be provided throughout the site in a grid network of roads. The main switchyard, operations and maintenance (O&M) building, water tanks, and water treatment facilities are located near the main entrance. The roads throughout the PV arrays provide access to the Unit Step-Up Transformers, feeder disconnects, and every PCS. The roads are spaced at a maximum of 1,000 feet apart and include a 24 foot wide perimeter road. With the perimeter access road, there is also an inherent 30 foot minimum array setback from the property boundary.

The proposed 20,000 gallon water tank shown on the layout provides the fire water storage in case of an emergency. The O&M building and any water treatment facilities will be provided with standard fire protection systems.

The detailed design single line drawings will show the various circuit breakers and disconnect switches throughout the electrical design included for maintenance, protection, and emergencies. There are circuit breakers and disconnect switches at the main switchyard ring bus (485 megawatts [MW]), Unit Step-Up Transformers (125MW), and feeders (24-26MW). There are also disconnect switches at each PCS transformer (2MW) for even more localized protection. Furthermore, the inverters themselves are designed with many protective features including a direct current (DC) contactor, alternating current (AC) circuit breaker, DC surge arrester, and lightning protection. The entire electrical design will include adequate array and equipment grounding and the appropriate ground fault protection.

A Data Acquisition System (DAS) will be integrated into the system to provide system monitoring and access to system information in case of an emergency. Furthermore, the marking and labeling of the equipment will provide warning and emergency guidance, particularly for the disconnect switches, conduits, raceways, enclosures, cable assemblies, combiner boxes, and junction boxes.

Administrative controls will also be implemented so that the BSPP is prepared to respond in emergency situations according to the highest safety standards. A draft of the standard Emergency Action Plan for all NextEra Energy PV Projects that will serve as the basis for the BSPP is included in Attachment DR 19-2. Furthermore the BSPP employees and local emergency personnel will be trained to safely handle emergency situations at the BSPP.

ATTACHMENT DR 1 PILE DRIVER NOISE ANALYSIS

Subject	Data Request 1: Hydraulic Ram Noise Responses to Data Requests – Set 1, Blythe Solar Power Project (09-AFC-6C)
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From	Jeff Goodson, AECOM
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Date	June 12, 2013
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The purpose of this memorandum is to provide an analysis of the potential noise impacts related to the use of a hydraulic ram (pile driver) during construction, in response to the California Energy Commission (CEC) Staff Data Request 1 for the Blythe Solar Power Project (09-AFC-6C). Staff requested an isopleths map of noise levels in dB from a hydraulic ram operating near the project boundary to 50 feet beyond boundary and 100 feet beyond boundary or until the dB level drops to <60 dB or lower from the edge of the boundary (the distance to the 60 dB level is to be included).

Although the Data Request 1 indicates that the 60 dB level is of interest, we note that the current biology Conditions of Certification (COCs) BIO-8 (#8) and BIO-16 indicate that 65 dB is the sound level that is to be used for biological resources compliance purposes. Therefore, the map has been prepared which gives both the 60 and 65 dB contours.

The Desert Sunlight Solar Farm in Riverside County is a nearby PV project that is currently in construction. An investigation into the type of equipment being used at the Desert Sunlight Project identified that a Vermeer PD10 pile driver is being used to install the posts that support the PV panels. It is anticipated that the Vermeer PD10 pile driver or similar equipment will also be used for construction of the Modified Project. If necessary to enable construction to continue close (e.g., within 390 feet) to the property line and remain in compliance with COC BIO-8 (#8), other equipment or sound barriers may be utilized as needed.

The magnitude of construction noise impacts depends on the type of construction activity, the noise level generated by various pieces of construction equipment, the duration of the activity, and the distance between the activity and the noise-sensitive receivers. Maximum noise levels from construction equipment typically range from approximately 70 dBA to 90 dBA at 50 feet from the source (FTA 2006). Impact equipment such as pile driving can range from 80 to 100 dBA at 50 feet.

Information was provided by the manufacturer of the Vermeer PD10 pile driver (AECOM 2013; Vermeer 2012) that a maximum instantaneous sound level of 84 dBA² at 50 feet would be expected. The installation of the trackers and panels will require two pile drivers to drive steel support piles into the ground over the entire site. Therefore, worst-case operation noise from the pile driver would temporarily occur as close as approximately 50 feet from the property line. Based on typical installation procedures and safety requirements, the two pile drivers are anticipated to be separated on the site. A single pile driver would be operating as close as 50 feet from the property line for a short time to install a single panel stand. The pile driver would then move to set another panel stand and would continue in this fashion.

Each panel stand installation process is anticipated to last 5 minutes or less. The pile driver can produce a maximum noise level of 84 dBA L_{max} at 50 feet when the hammer is operating (Vermeer, 2012). However, based on previous experience, a pile driver does not continuously operate at full power and only operates approximately 20% of an hour.

For BSPP, when a pile driver is operating onsite nearest to the property line (approximately 50 feet away), the maximum instantaneous noise level at the property line would be as high as approximately 84 dBA. Based on the standard noise attenuation rate of -6 dBA per doubling of distance for point sources, maximum off-site instantaneous noise levels from the pile driver operating at full power would be approximately:

- 84 dBA at 50 feet (0 feet from property line)
- 78 dBA at 100 feet (50 feet from property line)
- 72 dBA at 200 feet (150 feet from property line)
- 65 dBA at 439 feet (389 feet from property line)
- 60 dBA at 800 feet (750 feet from property line)

Therefore, as shown above, an off-site instantaneous noise level of 60 dBA could be observed at a distance of approximately 800 feet from the edge of the solar layout near the property line under worst-case conditions. An isopleths map as requested in Data Request 1 showing maximum noise levels from operation of a pile driver at the property boundary is attached.

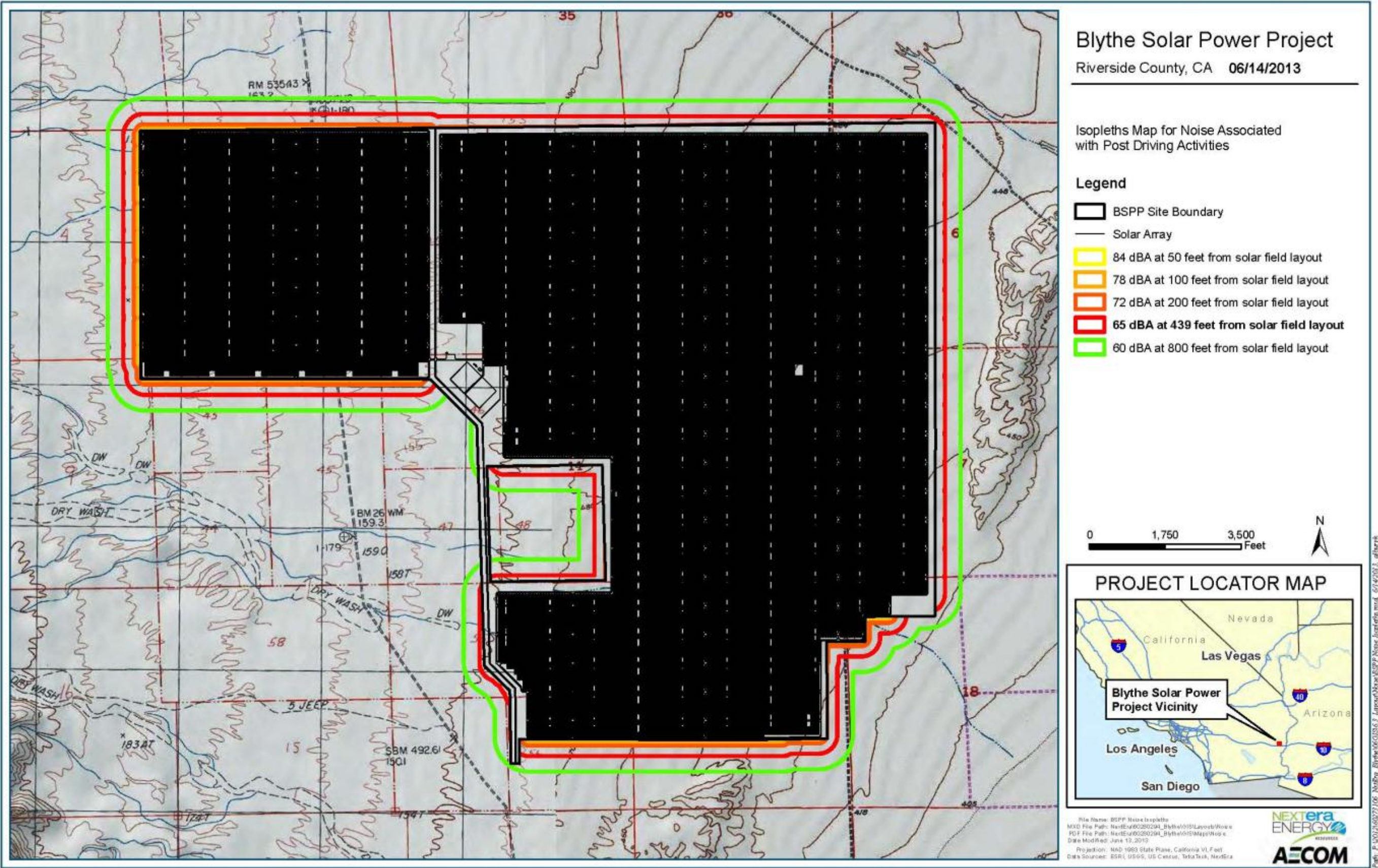
² Based on a 105.8 dBA at the operator's ear, as specified by the Vermeer PD10 Pile Driver Operator's Manual (2012). According to Mr. Dale Siever of Vermeer Sales Southwest, the operator's ear is approximately 4 feet from the part of the pile driver where noise is emitted. Therefore, based on the standard noise attenuation rate of -6 dBA per doubling of distance for point sources, noise from the pile driver would attenuate to approximately 84 dBA at 50 feet.

REFERENCES:

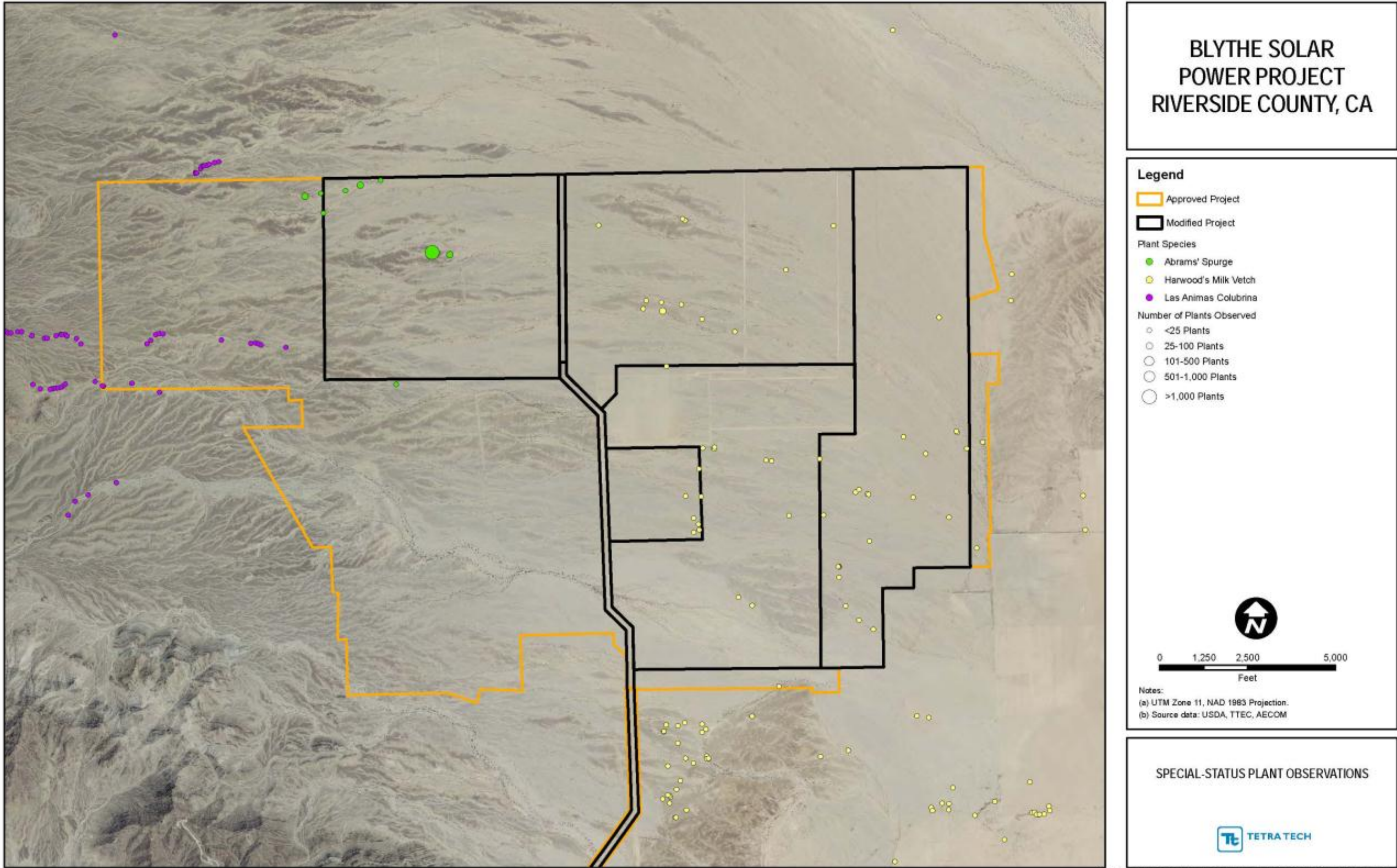
Federal Transit Administration (FTA) 2006. Transit Noise and Vibration Impact Assessment. May 2006. Washington, D.C.

AECOM 2013. Personal communications between Sean Wazlaw and Mr. Dale Siever of Vermeer Sales Southwest on June 10, 2013 and June 11, 2013.

Vermeer 2012. Operator's Manual for the PD10 Pile Driver.



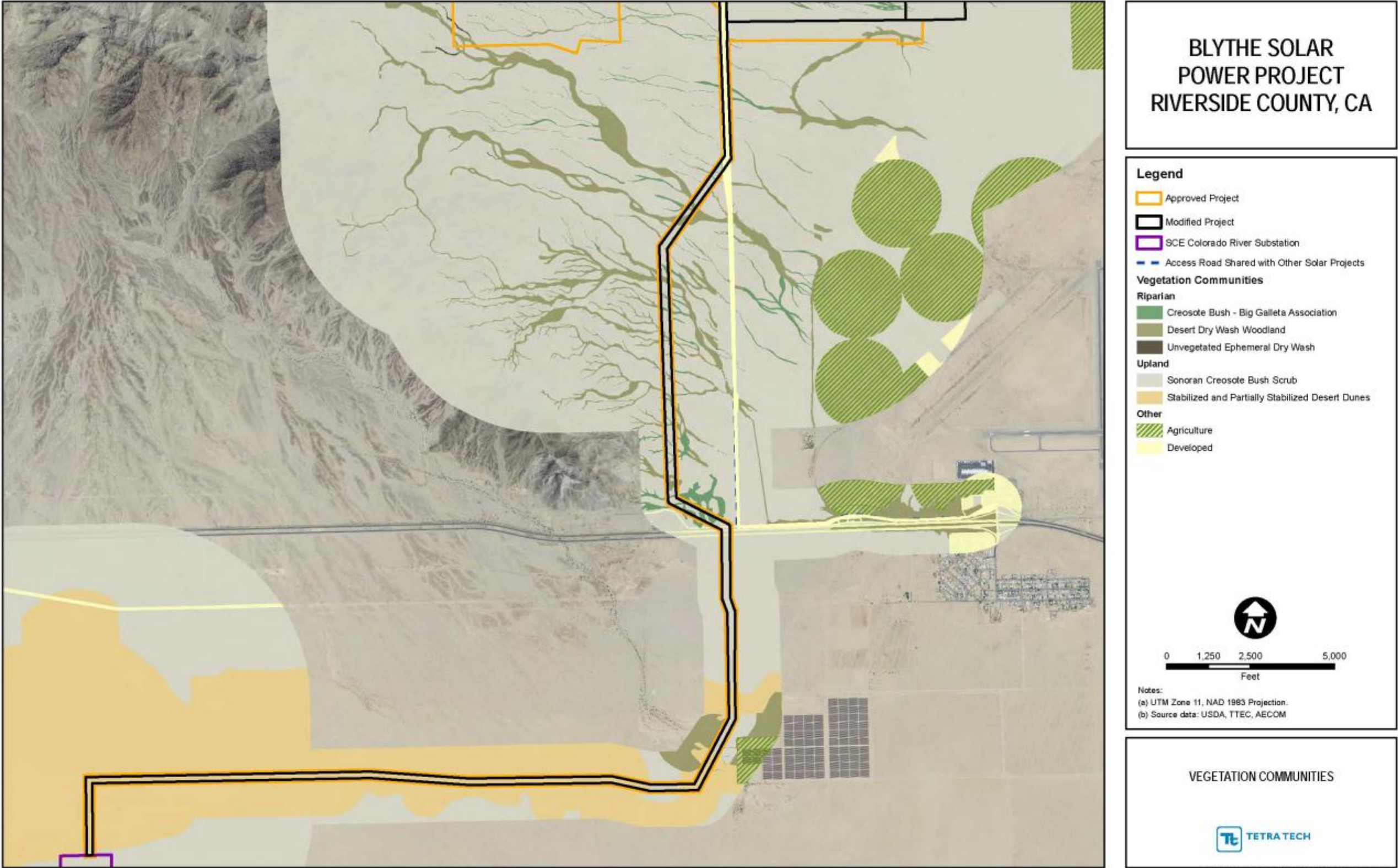
ATTACHMENT DR 2
MAP OF SPECIAL STATUS PLANTS





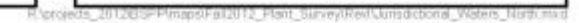
ATTACHMENT DR 5
MAP OF VEGETATION COMMUNITIES

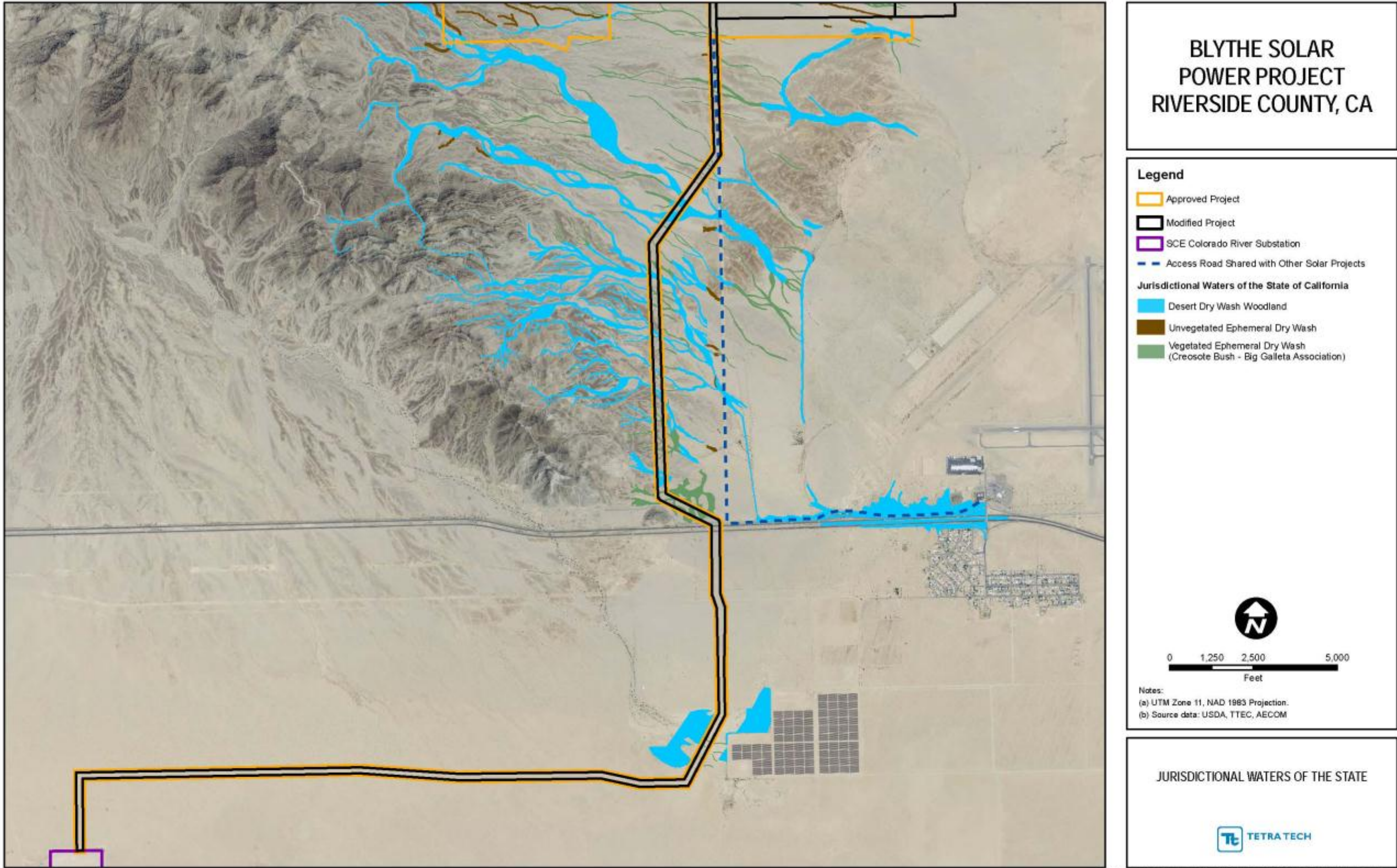




ATTACHMENT DR 6

**MAP OF EPHEMERAL DRAINAGES
(STATE JURISDICTIONAL WATERS)**





ATTACHMENT DR 14

SCOUR AND EROSION ANALYSIS

Subject **Data Request 14: Scour and Erosion Analysis**
Responses to Data Requests – Set 1
Blythe Solar Power Project (09-AFC-6C)

From David A. Jaffe, PhD, PE, D.WRE, and Casey Dick, AECOM

Date June 17, 2013

Introduction:

The purpose of this memorandum is to provide an analysis of the potential scour and erosion that could occur during a 100-year, 24-hour design storm event in the solar field, in response to the California Energy Commission (CEC) Staff Data Requests 13-15 for the Blythe Solar Power Project (09-AFC-6C), dated May 29, 2012. Staff requested:

- A map that shows the approximate number and locations of panel foundations that would be placed in the washes that cross the site;
- An analysis showing how much scour might be expected along panel foundations in the washes; and
- The measures that would be taken to mitigate any erosion impacts that would compromise the stability and reliability of the panels.

Enclosed herein is an analysis to respond to these Data Requests (DRs), in particular to DR 14. This analysis examines the extent of scour expected both with and without panels present on-site, and using two different methodologies. The methodologies are:

- 1) Los Angeles County Department of Public Works (LACDPW) Sedimentation Manual (SM) method, and
- 2) FLO-2D numerical modeling method.

The scour calculations are based on maximum flow depths and maximum velocities resulting from the 100-year, 24-hour rainfall event (Figure DR14-1 and Figure DR14-2, respectively) under post-development conditions. Values for maximum flow depth and velocity were obtained from FLO-2D model output files developed as part of the Pre/Post-Development Hydrology Report (AECOM 2013) that was included as Appendix C of the Blythe Solar Power Project (BSPP) Petition to Amend (PTA) filed in April 2013 (“BSPP Hydrologic Evaluation”). A brief description of each method is presented, followed by the results, and then our conclusions regarding the findings.

Description of the Scour Analysis Methodologies

Modifications to the alluvial fan bed are measured as bed adjustment in feet. Positive adjustment indicates aggradation and negative adjustment indicates degradation (e.g., scour, where degradation is shown as negative values on the figures). To be conservative, only negative adjustment, degradation and scour, are considered here. Several types of adjustment are considered in this study including general adjustment, long-term adjustment, and other scour. General adjustment is scour that occurs in an individual discharge event. Long-term adjustment consists of alluvial processes that occur over several years. Although considered, it was decided that long-term adjustment would not be included in this analysis since the present project does not alter the watershed hydrology, so no long-term bed changes are expected to result from the project's minimal changes to hydrology. In the present analysis, other scour is made up of local pier scour.

1. Los Angeles County Department of Public Works Sedimentation Manual Method

The LACDPW SM method follows from Federal Highway Administration (FHWA) HEC-18 criteria for scour at bridges. This method sums the general adjustment, long-term adjustment (not included in this analysis, as stated above), and other scour to arrive at a total scour depth. Both the general and long-term adjustment may be positive or negative, however, to be conservative only the negative (degradational) components are considered here. For the purposes of the present analysis, only pier scour is considered in other scour. General adjustment was calculated using the SM General Degradation Design Curve, presented in Appendix C (page C-3) of the Sedimentation Manual (2006), and for the purposes of the present analysis is given as:

$$GA = 0.0102v^2 + 0.1092v - 0.0275$$

where GA is the general adjustment in feet, and v is the velocity in feet per second (fps). Velocity was calculated using FLO-2D numerical modeling described in the BSPP Hydrologic Evaluation. Pier scour was calculated using the SM equation after Neill (1964), presented in Appendix C of the Sedimentation Manual, and given as:

$$PS = 1.04h^{0.65} v^{0.43} d^{0.135}$$

where PS is pier scour in feet, h is the depth of flow in feet, and d is the pier diameter in feet. For all calculations d is assumed to be equal to 0.5 feet.

2. FLO-2D Sediment Transport Numerical Modeling

The FLO-2D numerical model is designed to be utilized for delineating flood hazards or designing flood mitigation. The model is made up of a series of modules that separate analysis into component parts including rainfall, channel discharge, overland flow, street flow, infiltration, culverts and other physical features. Channel discharge, as well as street flow, is modeled in one-dimension. Overbank flow is computed when channel capacity is exceeded. A full description of the model software can be found in the model documentation, and details of the numerical modeling are located in BSPP Hydrologic Evaluation.

Sediment data used in the FLO-2D sediment transport analysis were taken from sieve analyses of soil samples presented in Kleinfelder (2009). The parameters used in the FLO-2D analysis that were based on the soil data in the Kleinfelder Geotechnical Report (2009) included the transport equation, the gradient coefficient, the D_{50} , and the grain size distribution. The Yang transport equation was used because this empirical relationship was determined to be representative of the general soil characteristics across the project site.

Scour Analysis Results

1. LACDPW SM Method Results

The result of the general adjustment analysis is shown in Figure DR14-3. The figure shows that the general adjustment ranges from 0.00 to 0.12 feet of degradation during the 100-year, 24-hour event. The results of the analyses for pier scour and total adjustment are shown in Figure DR14-4 and DR14-5, respectively. The analysis indicates that pier scour is expected to range from 0.03 to 1.47 feet over the project site for the 100-year, 24-hour event. The total scour (general adjustment plus pier scour) is expected to range from 0.03 to approximately 1.57 feet over the project site during the 100-year, 24-hour event when based on the LACDPW SM method.

Based on these results and review of Figures DR14-2 – DR14-5, one can see that the total scour is dominated by pier scour, while general adjustment contributes a relatively small percentage of the total. The maximum total scour will occur where piers will be located (to be determined during final design) and where the flow velocity (shown on Figure DR14-2) is the greatest during the 100-year, 24-hour precipitation event. As shown on Figure DR14-2 (Max Velocity for 100-year storm event), velocities on the BSPP site are relatively low, with a maximum velocity as mostly less than 0.8 fps, and in all cases less than 1.4 fps. The relatively low velocity across the site leads to relatively low total degradation calculated as mostly less than 1 foot (as shown on the figures),

but less than 1.6 feet where velocity and/or depth is the greatest. As these results are for the 100-year, 24-hour precipitation event, they are considered worst-case for design purposes, and more frequent precipitation events are expected to produce less scour over the project site.

As stated above, this analysis assumed a pier diameter of six inches, and it is noted that piers of larger or smaller diameters could result in different depths of design scour that will be accounted for in the final design.

2. FLO-2D Method Results

The FLO-2D model was run to simulate the sediment transport associated with the 100-year, 24-hour precipitation event. The bed adjustment values resulting from the simulation are shown in Figure DR14-6. The FLO-2D model results indicate bed adjustment (degradation only) ranging from 0.00 to 1.20 feet within the project site. The FLO-2D method shows a slightly greater general bed adjustment than the general adjustment for the SM method. Figure DR14-7 shows the bed adjustment resulting from the sum of the FLO-2D and pier scour analyses (using the same pier scour values calculated using Neill's method). The combined FLO-2D bed adjustment and pier scour indicates that the total scour is expected to range from 0.03 to 1.64 feet.

Similar to the LACDPW SM method, the results indicate that the greatest degradation is largely confined to the relatively shallow and narrow feeder channels with somewhat higher relative velocity and concentrated flows. However, total scour remains less than 1.7 feet with this method for the 100-year, 24 hour event, and total degradation is expected to be less during the more frequent, less intensive precipitation events.

Comparison of Results of the Two Methodologies

Two methodologies using different analytical approaches to determining scour were applied, to aid in removing bias from the analysis. A comparison of the minimum and maximum scour estimates for each methodology is presented in Table DR14-1. A comparison of total adjustment estimated by both the LACDPW SM and FLO-2D methodologies shows that both methods predict a similar magnitude of scour during the 100-year, 24-hour precipitation event. A comparison of Figures DR14-5 and DR14-7 (total degradation for the two methods, respectively) indicates that the LACDPW SM method predicts degradation over a larger portion of the overall project site, while the FLO-2D method indicates a lesser areal extent of scour, but with slightly greater maximum scour: 1.57 vs. 1.64 feet, respectively, for the 100-year, 24-hour precipitation event.

Because of the relatively low depth of total degradation calculated over the project site, only simple adjustment to the final engineering design of the PV panel support structures, such as post length or scour protection, may need to occur where panels are located in areas of higher on-site depth and/or velocity. However, it is expected that best management practices (BMPs) for the control of erosion and sediment transport will be employed as the primary mitigation for potential scour, to ensure the stability and reliability of the PV panels.

Table DR14-1: A comparison of LACDPW Sedimentation Manual and FLO-2D minimum and maximum adjustment estimates

Methodology	Min Adjustment (ft)	Max Adjustment (ft)
LACDPW SM General Adjustment	0.00	0.12
Other Scour (Pier)	0.03	1.47
Total Adjustment (General + Pier Scour)	0.03	1.57
FLO-2D Bed Adjustment	0.00	1.20
FLO-2D Bed Adjustment + Pier Scour	0.03	1.64

Conclusions:

To address the specific question presented in DR14, two different analyses were employed: one numerical and one empirical. The results, shown in Figures DR14-5 and DR14-7, illustrate the expected scour at the panels during the 100-year, 24-hour design event over the entire project site. No aggradation is considered in the analysis to be conservative. It is important to note that the figures illustrate the scour potential assuming that panels could be located everywhere onsite, and do not account for the location of roads and other related infrastructure. Further, the analysis assumes that the support piers/posts for the PV panels employed throughout the field will have a six inch diameter supports, which is a typical installation for this type of structure on project sites with similar geotechnical attributes.

This analysis includes both general adjustment and local pier scour. Both the general adjustment and local pier scour are combined wherever foundation elements for PV panels will be present. Each of the methodologies employed in this analysis produce similar results for total scour during the 100-year, 24-hour precipitation event, with an approximate spatial variation of total scour from 0.03 to 1.64 feet. Nowhere is total scour greater than 2 feet, and more frequent events are expected to produce less total degradation. The calculated total scour is relatively low considering the low frequency of the 100-year, 24-hour event simulated.

Generally, the erosion caused by scour can be mitigated using off-the-shelf BMPs including soil binders. Other mitigation strategies may include local site grading and panel support placement design. A draft Drainage, Erosion, and Sediment Control Plan (DESCP) for BSPP has been prepared (see Attachment DR15). This DESCP document provides the BMPs that are proposed for this Project to minimize erosion and sediment transport, and hence is expected to minimize damage to the PV panels and reduce scour during the more frequent precipitation events.

REFERENCES:

AECOM. 2013. Pre/Post-Development Hydrology Report. Blythe Solar Power Project (09-AFC-6C). Provided as Appendix C (BSPP Hydrologic Evaluation) of the Revised Petition for Amendment to the California Energy Commission.
(http://www.energy.ca.gov/sitingcases/blythe_solar/pv_amendment/rev-amendment/BSPP_Revised_PTA_Appendices.pdf)

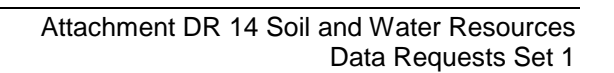
Federal Highway Administration (FHWA). 2001. Publication Number: NHI-01-001 Evaluating Scour at Bridges, Fourth Edition.

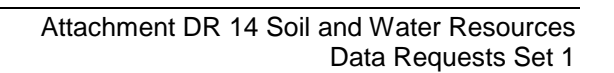
Kleinfelder. 2009. Preliminary Geotechnical Investigation Report. Submitted as part of Application for Certification Volume 3, Data Adequacy Supplement for Blythe Solar Power Project (09-AFC-6).

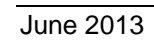
Los Angeles County Department of Public Works. 2006. Sedimentation Manual (SM), Second Edition. March.

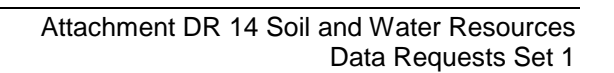
Neill, C.R. 1964. River bed scour – a review for engineers, “Canadian Good Roads Association Technical Publication No. 23.

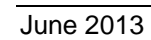
NextEra Blythe Solar Energy Center, LLC. 2013. Blythe Solar Power Project Revised Petition for Amendment. April.

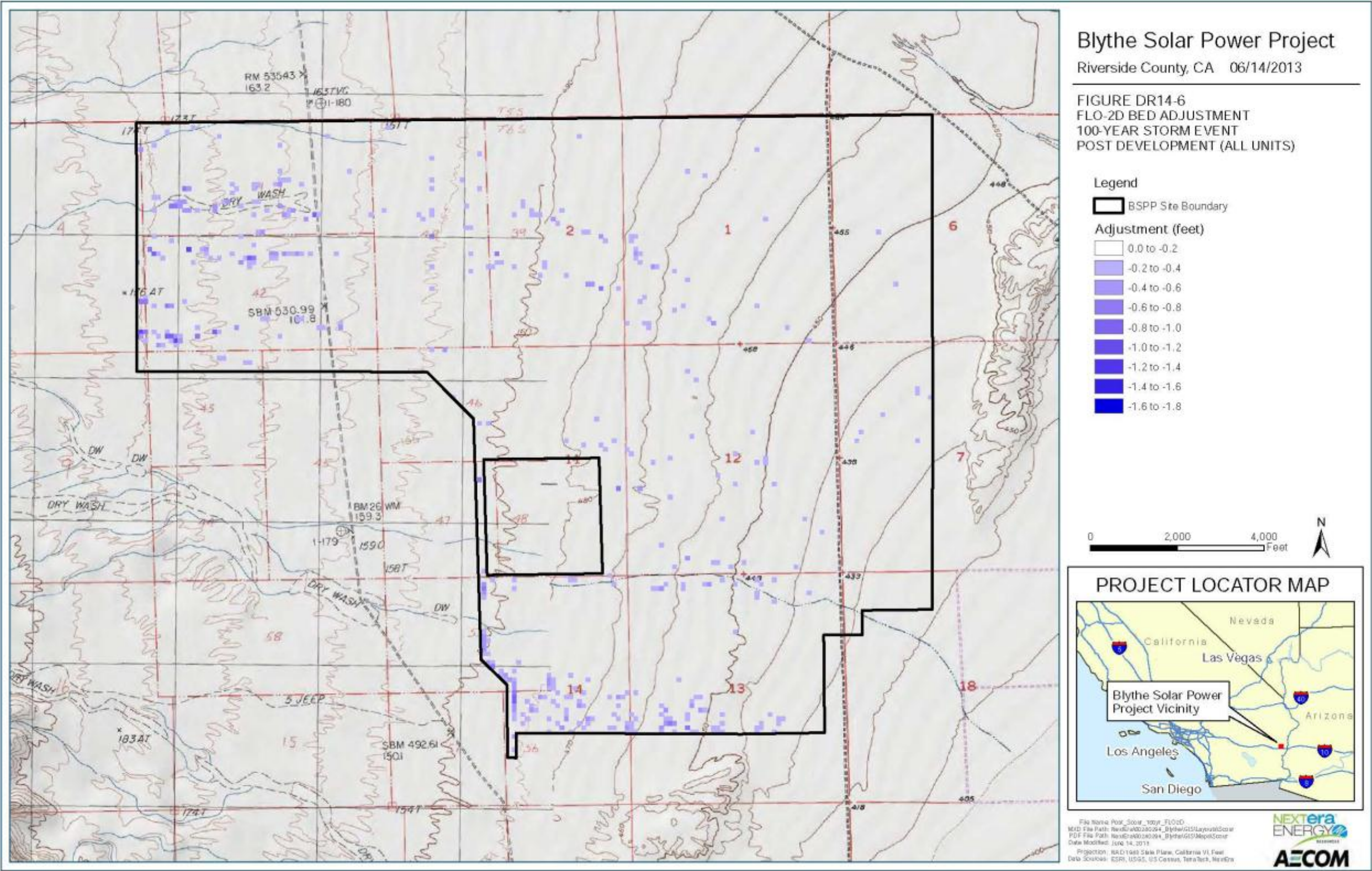


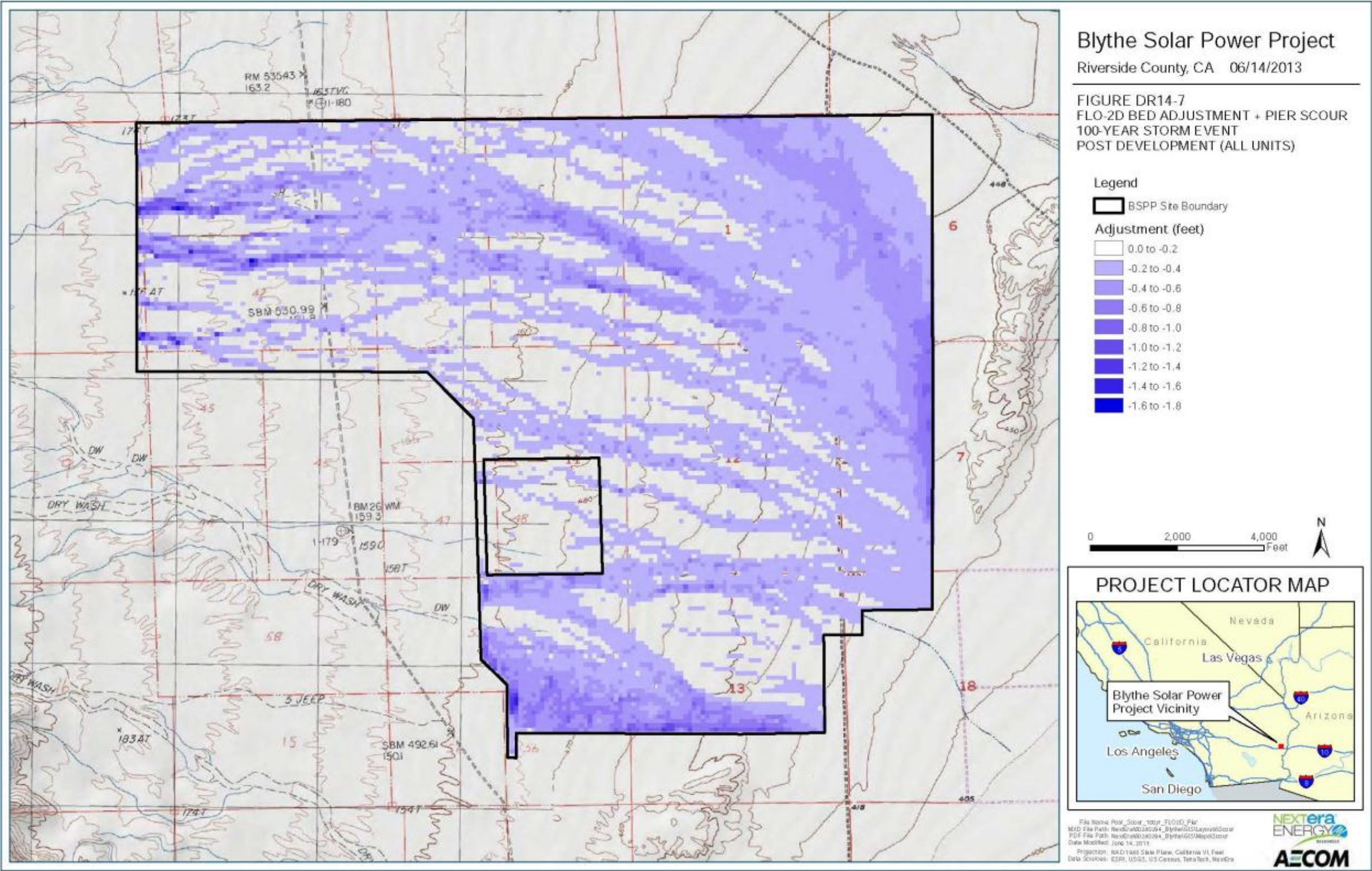












ATTACHMENT DR 15
DRAINAGE, EROSION, AND
SEDIMENT CONTROL PLAN

This Plan has been provided separately to the CEC on a CD.

**ATTACHMENT DR 15-S
REPORT OF WASTE DISCHARGE
AMENDMENT APPLICATION**

The full Report of Waste Discharge Amendment has been provided separately to the CEC on a CD.

AECOM Environment

1-1

1.0 Application Form

CALIFORNIA ENVIRONMENTAL
PROTECTION AGENCY



State of California
Regional Water Quality Control Board
**APPLICATION/REPORT OF WASTE DISCHARGE
GENERAL INFORMATION FORM FOR
WASTE DISCHARGE REQUIREMENTS OR NPDES PERMIT**



Page 5

I. FACILITY INFORMATION

A. Facility:

Name: Blythe Solar Power Plant			
Address: 8 miles east of Blythe, CA, 2 miles north of I-10			
City: Blythe	County: Riverside	State: CA	Zip Code: 92226
Contact Person: Kenneth Stein		Telephone Number: (561) 691-2216	

B. Facility Owner:

Name: NextEra Blythe Solar Energy Center, LLC		Owner Type (Check One) 1. <input type="checkbox"/> Individual 2. <input type="checkbox"/> Corporation	
Address: 700 Universe Blvd.		3. <input type="checkbox"/> Governmental Agency 4. <input type="checkbox"/> Partnership	
City: Juno Beach	State: FL	Zip Code: 33408	5. <input checked="" type="checkbox"/> other: <u>Limited Liability Co.</u>
Contact Person: Greg Schneck		Telephone Number: (561) 304-5274	Federal Tax ID:

C. Facility Operator (The agency or business, not the person):

Name: NextEra Blythe Solar Energy Center, LLC		Operator Type (Check One) 1. <input type="checkbox"/> Individual 2. <input type="checkbox"/> Corporation	
Address: 700 Universe Blvd.		3. <input type="checkbox"/> Governmental Agency 4. <input type="checkbox"/> Partnership	
City: Juno Beach	State: FL	Zip Code: 33408	5. <input checked="" type="checkbox"/> other: <u>Limited Liability Co.</u>
Contact Person: Greg Schneck		Telephone Number: (561) 304-5274	

D. Owner of the Land:

Name: Bureau of Land Management		Owner Type (Check One) 1. <input type="checkbox"/> Individual 2. <input type="checkbox"/> Corporation	
Address: 1201 Bird Center Drive		3. <input checked="" type="checkbox"/> Governmental Agency 4. <input type="checkbox"/> Partnership	
City: Palm Springs	State: CA	Zip Code: 92262	5. <input type="checkbox"/> Other:
Contact Person: John Kalish		Telephone Number: 760-833-7100	

E. Address Where Legal Notice May Be Served:

Address: 700 Universe Blvd.			
City: Juno Beach	State: FL	Zip Code: 33408	
Contact Person: Greg Schneck		Telephone Number: (561) 304-5274	

F. Billing Address:

Address: See Section E.			
City:	State:	Zip Code:	
Contact Person:		Telephone Number:	

Form 200 (6/97)

BSPP ROWD Amendment

June 2013

AECOM Environment

1-2

CALIFORNIA ENVIRONMENTAL
PROTECTION AGENCY



State of California
Regional Water Quality Control Board
**APPLICATION/REPORT OF WASTE DISCHARGE
GENERAL INFORMATION FORM FOR
WASTE DISCHARGE REQUIREMENTS OR NPDES PERMIT**

Page 6



II. TYPE OF DISCHARGE

Check Type of Discharge(s) Described in this Application (A or B):

☒ A. WASTE DISCHARGE TO LAND

☐ B. WASTE DISCHARGE TO SURFACE WATER

Check all that apply:

- | | | |
|---|---|---|
| <input type="checkbox"/> Domestic/Municipal Wastewater Treatment and Disposal | <input type="checkbox"/> Animal Waste Solids | <input type="checkbox"/> Animal or Aquacultural Wastewater |
| <input type="checkbox"/> Cooling Water | <input type="checkbox"/> Land Treatment Unit | <input type="checkbox"/> Biosolids/Residual |
| <input type="checkbox"/> Mining | <input type="checkbox"/> Dredge Material Disposal | <input type="checkbox"/> Hazardous Waste (see instructions) |
| <input type="checkbox"/> Waste Pile | <input checked="" type="checkbox"/> Surface Impoundment | <input type="checkbox"/> Landfill (see instructions) |
| <input type="checkbox"/> Wastewater Reclamation | <input checked="" type="checkbox"/> Industrial Process Wastewater | <input checked="" type="checkbox"/> Storm Water |
| <input type="checkbox"/> Other, please describe: _____ | | |

III. LOCATION OF THE FACILITY

Describe the physical location of the facility.

1. Assessor's Parcel Number(s)

Facility:

Discharge Point:

2. Latitude

Facility: 33 39' 41"

Discharge Point:

3. Longitude

Facility: 114 44' 59"

Discharge Point:

IV. REASON FOR FILING

- | | |
|--|--|
| <input type="checkbox"/> New Discharge or Facility | <input checked="" type="checkbox"/> Changes in Ownership/Operator (see instructions) |
| <input checked="" type="checkbox"/> Change in Design or Operation | <input checked="" type="checkbox"/> Waste Discharge Requirements Update or NPDES Permit Reissuance |
| <input checked="" type="checkbox"/> Change in Quantity/Type of Discharge <input type="checkbox"/> Other: _____ | |

V. CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

Name of Lead Agency: California Energy Commission

Has a public agency determined that the proposed project is exempt from CEQA? ☐ Yes ☒ No

If Yes, state the basis for the exemption and the name of the agency supplying the exemption on the line below.

Basis for Exemption/Agency: _____

Has a "Notice of Determination" been filed under CEQA? ☐ Yes ☒ No

If Yes, enclose a copy of the CEQA document, Environmental Impact Report, or Negative Declaration. If no, identify the expected type of CEQA document and expected date of completion.

Expected CEQA Documents:

☒ EIR ☐ Negative Declaration

Expected CEQA Completion Date: TBD

Form 200 (6/97)

BSPP ROWD Amendment

June 2013

AECOM Environment

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CALIFORNIA ENVIRONMENTAL
PROTECTION AGENCY



State of California
Regional Water Quality Control Board

APPLICATION/REPORT OF WASTE DISCHARGE
GENERAL INFORMATION FORM FOR
WASTE DISCHARGE REQUIREMENTS OR NPDES PERMIT



Page 7

VI. OTHER REQUIRED INFORMATION

Please provide a COMPLETE characterization of your discharge. A complete characterization includes, but is not limited to, design and actual flows, a list of constituents and the discharge concentration of each constituent, a list of other appropriate waste discharge characteristics, a description and schematic drawing of all treatment processes, a description of any Best Management Practices (BMPs) used, and a description of disposal methods.

Also include a site map showing the location of the facility and, if you are submitting this application for an NPDES permit, identify the surface water to which you propose to discharge. Please try to limit your maps to a scale of 1:24,000 (7.5' USGS Quadrangle) or a street map, if more appropriate.

VII. OTHER

Attach additional sheets to explain any responses which need clarification. List attachments with titles and dates below:

See attached Report of Waste Discharge document

You will be notified by a representative of the RWQCB within 30 days of receipt of your application. The notice will state if your application is complete or if there is additional information you must submit to complete your Application/Report of Waste Discharge, pursuant to Division 7, Section 13260 of the California Water Code.

VIII. CERTIFICATION

"I certify under penalty of law that this document, including all attachments and supplemental information, were prepared under my direction and supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

Print Name: Greg Schnack

Title: Vice President

Signature:

Date: 6/14/2013

FOR OFFICE USE ONLY

Date Form 209 Received:	Letter to Discharge:	Fee Amount Received:	Check #:
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Form 209 (5/97)

BSPP ROWD Amendment

June 2013

ATTACHMENT DR 16
CALIFORNIA ISO CORRESPONDENCE



December 31, 2012

Bruce McAllister
Queue Management
Infrastructure Contracts & Management
California ISO
250 Outcropping Way
Folsom, CA 95630
Telephone: 916-608-7009

Subject: **NextEra Blythe Solar Energy Center Project**

Dear Bruce:

This is formal response to the California ISO response to our Modification Request for Q294 Blythe Solar Energy Center. Based on the CAISO assessment results, we understand that the project is considered to be now 485 MW PV-Solar and 515 MW Thermal Solar project. Also, we are confirming that NextEra will be converting 485 MW of this project to PV Solar technology to match the amount of MW that have been determined by the CAISO that can be successfully converted to PV.

As you are aware we are entering the CAISO Onetime Downsizing Window by January 4, 2013 to request the Blythe Solar project downsize to the 485 MW threshold level.

Sincerely,

Guillermo Narvaez
Manager Transmission

Copy: Dan Neville
Greg Schneck
Scott Busa
File



California Independent System Operator Corporation

December 20, 2012

Guillermo 'Bill' Narvaez
Transmission Business Manager
NextEra Energy Resources
P.O Box 14000
Juno Beach, FL 33408

RE: Response to Modification Request for the Blythe Solar Energy Center
(ISO Queue # 294)

Dear Mr. Narvaez:

The California Independent System Operator Corporation ("ISO") has completed its review of NextEra's request dated October 19, 2012 to change the technology of the Blythe Solar Energy Center ("Project") from Solar Thermal to Solar Photovoltaic ("PV"). Section 6.9.2.2 of the GIP (Appendix Y to the ISO tariff), provides that any modification of the project, other than as specifically provided for in Section 6.2 after the Phase I Interconnection Study, may constitute a material modification. The technology specified in the original Interconnection Request for the Project was Solar Thermal. Thus, any change of the technology for the Project at this stage of the interconnection process is subject to a material modification review by the ISO.

The ISO has found a material impact on later queued customers resulting from the change of technology and therefore the change to Solar PV for the full 1,000 MW Project is not approved. However, at this time, and based on the analysis by SCE and the ISO, 485 MW of the 1000 MW Project could be converted to PV (leaving the remaining 515 MW as Solar Thermal),

Due to the large number of projects requesting Solar PV and the limited amount of 'headroom' in the system to support Solar PV, the full 1,000 MWs cannot be approved to change technology. Given the known 'Partial Termination Charge' contractual rights for the Project, and the upcoming generator downsizing initiative, several options are available to NextEra if it chooses to reduce the size of the Project.

www.caiso.com | 250 Outcropping Way, Folsom, CA 95630 | 916.351.4400

California Independent System Operator Corporation

The ISO is focused on advancing projects in the queue to commercial operation. As part of this effort, the ISO will continue to request periodic updates pursuant to Section 5.7 of the LGIA to ensure that the Project is meeting its milestones and is on schedule to meet its COD. Please keep in mind that failure to meet the milestones, if not cured under the LGIA, may result in a breach of the LGIA.

Please feel free to contact Bruce McAllister at 916-608-7009 or at bmcallister@caiso.com with any questions.

Kindest regards,



Deborah A. Le Vine
Director, Infrastructure Contracts & Management

cc: Jorge Chacon (SCE)
John Tucker (SCE)
Grant Rosenblum (NextEra)

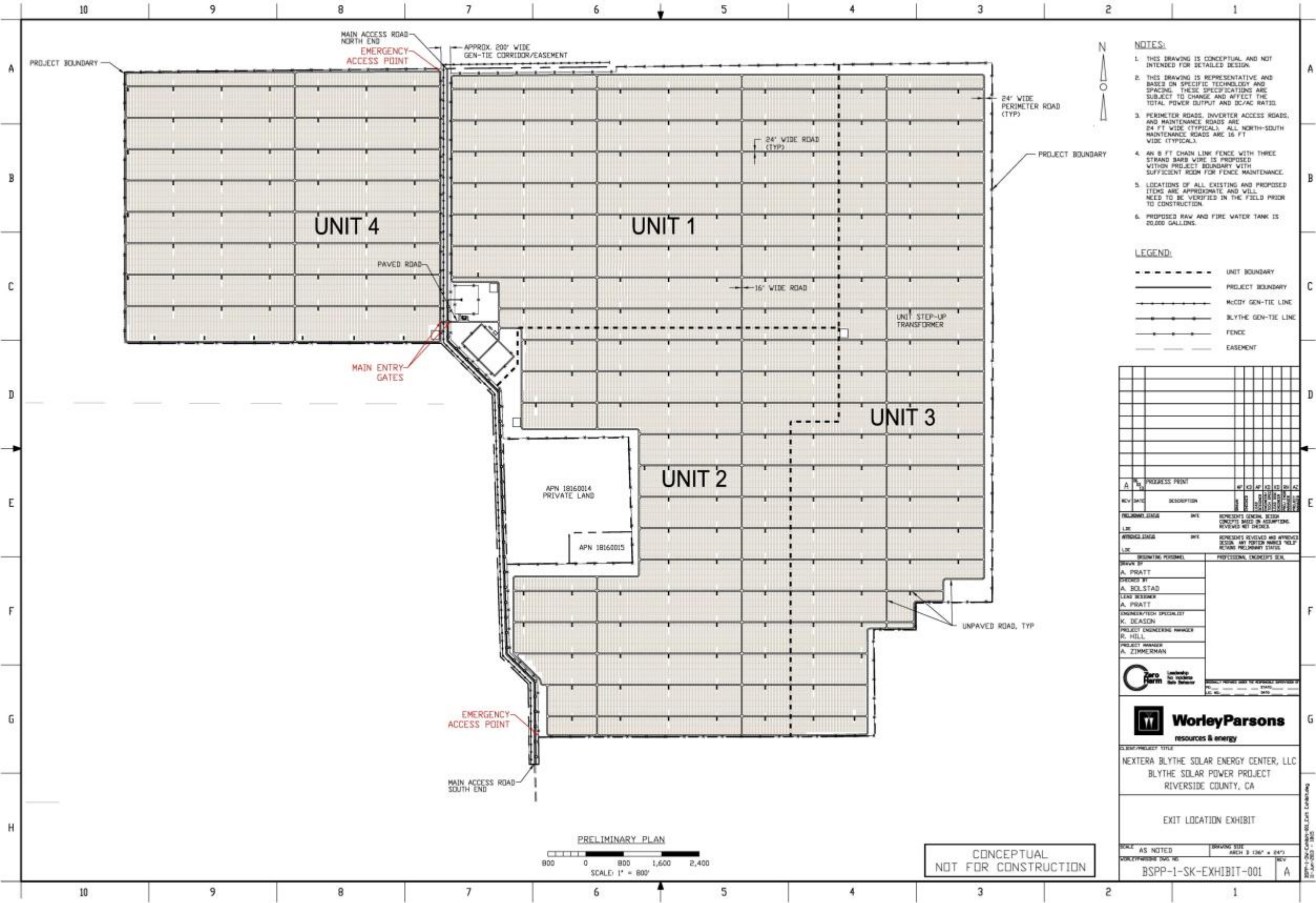
**ATTACHMENT DR 17
CRS ONE-LINE DIAGRAM**

The diagram illustrates a power system configuration. At the top, a horizontal line represents the 230KV BUS, with bus numbers 1 through 8. A vertical line labeled "Genesis (Gen Tie) 250 MW" with an upward arrow connects bus 7 to a higher level. Below this, a horizontal line represents the 500KV BUS, with bus numbers 2 through 9. A transformer labeled "4 - Single Phase 500-220-13.8 KV" connects the 500KV BUS to the 230KV BUS. The diagram shows various circuit breakers (represented by rectangles) and disconnects (represented by diagonal lines) between the buses. Labels "Network Line" are present at the bottom, indicating connections to external networks.

**ATTACHMENT DR 18
UPDATED PHASE I ESA**

This document has been provided under separate cover to the CEC on CD.

ATTACHMENT DR 19
EMERGENCY PLAN OUTLINE AND EXIT FIGURE





	XXXXPV Solar Site NextEra Energy Solar Operations Emergency Action Plan Template *Generic Draft *	Number:	001
		Issued:	
		Revised:	
		Pages:	1 of 25
		Approved:	

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Facility Location Information	5
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Emergency Action Plan Annual Drill	9
Immediate Site Evacuation Procedure (Appendix 1)	10
Delayed Site Evacuation Procedure (Appendix 2)	12
Designated Egress Routes and Muster Areas (Appendix 3)	14
Personnel Injuries/Serious Health Conditions (Appendix 4)	15
Fire Response Plan (Appendix 5)	18
Chemical/Oil Spills and Releases (Appendix 6)	20
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		Pages:	2 of 25
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This Emergency Action Plan will be implemented as herein described.

STATEMENT OF COMPLIANCE

It is noted that this Contingency Plan was prepared in 24 November 2011 by NextEra Energy XXXX PV Solar Sites.

Revised: XXXXX


Thus, I hereby state that the NextEra Energy XXXX PV Solar Sites has evaluated the requirements of all applicable State and Federal Laws and recognize that this Plan has been prepared in accordance with the requirements therein.

Name: _____

Signature: _____

Title: General Manager

Date: _____

	XXXXPV Solar Site NextEra Energy Solar Operations Emergency Action Plan Template *Generic Draft *	Number:	001
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		Pages:	3 of 25
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DESIGNATION OF FACILITY EMERGENCY COORDINATORS

It will be plant policy that the *Facility Representative* (will be known as the “Facility Emergency Coordinator” for the purposes of defining roles in this Emergency Action Plan. Alternate personnel may serve as the Facility Emergency Coordinator when necessary.

Primary Facility Emergency Coordinator:

Site Manager/Lead Technician

Alternate Facility Emergency Coordinator:


Solar Technician

FOR INFORMATION ABOUT THIS PLAN

Personnel who may be contacted for further information or explanation of duties under this plan are as follows:

Site Manager/Lead Technician
Solar Technician

General Manager

	XXXXPV Solar Site NextEra Energy Solar Operations Emergency Action Plan Template *Generic Draft *	Number:	001
		Issued:	
		Revised:	
		Pages:	4 of 25
		Approved:	

1.0 Process Description

The Emergency Action Plan outlined in this document establishes the planned response actions that will be taken by personnel at the NextEra Energy XXXX PV Solar Sites in the event of an emergency situation.

2.0 Objectives

To establish a pre-planned set of actions that are to be taken when an emergency occurs that will minimize health risks to plant personnel and people in the surrounding community, as well as minimize adverse impacts to the environment. It is intended that this plan will make clear to all plant personnel the actions that they are required to take if an emergency situation develops.

3.0 Administration

Paper copies of this Emergency Action Plan shall be maintained at the following plant locations at all times:

- (1) The Facility Maintenance Building


An electronic copy of this plan will also be accessible on the facility's LAN <\\sscsa01\everyone> Emergency Action Plan. This plan will be reviewed whenever revisions are made, and at least annually by the Associate Wind Site Manager.

4.0 Regulatory References

This plan has been developed to ensure compliance with OSHA 29 CFR 1910.38 (Emergency Action Plans). NextEra Energy XXXX PV Solar Sites acknowledges awareness that any significant changes in types or quantities of chemicals or other hazards on the site will necessitate review of this plan. Any such revisions to this plan will be communicated with appropriate agencies and organizations.

5.0 Training

All NextEra Energy employees at the facility shall receive training on this Emergency Action Plan whenever it is modified or on at least an annual basis. Employees will also be trained when this plan is initially implemented. Contractors and visitors who will enter operating areas of the facility will be trained on plant alarms, mustering locations and evacuation procedures before they enter the facility for the first time, and at least annually thereafter. A listing of contractors with current training on this plan will be

	XXXXPV Solar Site NextEra Energy Solar Operations Emergency Action Plan Template <i>*Generic Draft *</i>	Number:	001
		Issued:	
		Revised:	
		Pages:	5 of 25
		Approved:	

maintained at the facility for reference purposes.

6.0 Facility Location Information for Outside Emergency Responders

The NextEra Energy XXXX PV Solar Site is located at:

7.0 Plant General Emergency Procedure

This emergency plan was developed for the following plausible contingencies that could transpire at the facility:

- (1) Personnel injuries and serious health conditions
- (2) Fires
- (3) Chemical releases
- (4) Weather-related causes
- (5) Threats to the facility that warn of danger to personnel
- (6) Pandemics
- (7) Sabotage Reporting
- (8) Other unanticipated events


It will be the responsibility of the Site Manager/Lead Technician to assess a developing emergency situation and initiate the appropriate actions in this plan to protect personnel, the surrounding environment, and plant equipment from adverse damages. In the event of an emergency, the following actions will be immediately performed:

7.1 *If the event is a fire, medical, or police emergency, contact 911 immediately.*

7.2 If the event is a fire emergency, medical emergency, police emergency or weather-related emergency, ensure that the following are also contacted:

Title	Name	Office Phone	Cell Phone	Home Phone
Site Leader	TBD	TBD	TBD	TBD
Plant Technician	TBD	TBD	TBD	N/A
Secondary Contact	TBD	TBD	TBD	N/A
On Call Technician	TBD	TBD	TBD	N/A
FPL FPDC	Duty personnel	(561) 694-3636	N/A	N/A

7.3 Any work-related permits in affect shall be immediately voided, and personnel involved in such work shall cease all activities.

	XXXXPV Solar Site NextEra Energy Solar Operations Emergency Action Plan Template *Generic Draft *	Number:	001
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		Revised:	
		Pages:	6 of 25
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7.4 All sources of ignition, including hot work, burning cigarettes, portable tools and motor vehicles shall be immediately secured.

7.5 Based upon the type and extent of the emergency, the Site Manager/Lead technician should assess whether an evacuation should be initiated. The following criteria should be considered in rendering a decision to conduct an evacuation of the facility:

- (a) The affected parts of the facility and severity of the emergency.
- (b) Restrictions in egress routes caused by the emergency.
- (c) Wind direction (if the emergency involves gases/vapors)
- (d) People currently located at the facility (day shift, night/weekend shift, visitors/contractors, etc.)


7.6 If the Site Manager/Lead technician determines that a facility evacuation is necessary, he/she must determine which type of evacuation to direct. The following sections describe the types of evacuations that can be performed:

(a) Immediate Site Evacuation

This type of evacuation would be used only in the event of an emergency grave enough to warrant immediate evacuation of all personnel. ***In this type of evacuation, operating area personnel should evacuate without regard for shutdown of plant systems or for placing plant systems in the safest mode possible.*** This type of evacuation should only be utilized if the safety of personnel in operating areas is in immediate and severe danger, such that any delay in evacuating could result in deaths or injuries to personnel.

(b) Delayed Site Evacuation


This type of evacuation would be used in a serious emergency situation where non-essential personnel (those not involved in plant operations or emergency coordination) are immediately evacuated as a precaution, and essential personnel remain in operating areas to perform a controlled shutdown of the facility prior to evacuating. It is anticipated that this would be the primary type of evacuation used in response to serious emergencies at the facility. The Site Manager /Lead technician and/or Facility Emergency Coordinator must assess whether or not the prevailing circumstances warrant keeping essential personnel in plant operating areas to perform a controlled shutdown of the facility. ***If personnel will not be exposed to unnecessary danger to perform facility shutdown and/or***

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place the facility into a safe condition, then this is the preferred type of evacuation, as opposed to an Immediate Site Evacuation.

NOTE: Although the Site Manager /Lead technician (or Facility Emergency Coordinator) may initially designate an evacuation to be a Delayed Site Evacuation, he/she should always keep in mind that conditions may change rapidly, and result in the need to call for an Immediate Site Evacuation.

- 7.7 If the site Manager/Lead technician (or Facility Emergency Coordinator, as appropriate) determines that an evacuation is necessary, he/she shall ensure that a sounding of the plant alarm is initiated. In this case, an evacuation alarm should be sounded and all employees/visitors accounted for.
- 7.8 If an evacuation has been directed, and following the sounding of the evacuation alarm, the Site Manager/Lead technician shall ensure that instructions for evacuation are communicated to personnel over the plant radio system. These instructions should include the following items at a minimum:
- (a) The type of evacuation to be performed
 - (b) Immediate Site Evacuation
 - (c) Delayed Site Evacuation
 - (d) The nature of the emergency
 - (e) The location(s) of the emergency
 - (f) Any egress routes that should not be used by evacuating personnel (if known and applicable)
- 7.9 If an evacuation has been ordered, personnel shall follow one of the following evacuation procedures, as appropriate, based upon the direction of the Site Manager/Lead technician and/or Facility Emergency Coordinator:
- (a) Immediate Site Evacuation (APPENDIX 1)
 - (b) Delayed Site Evacuation (APPENDIX 2)
- 7.10 Perform the appropriate follow-up procedure(s) below, based upon the type of emergency that is occurring:
- (a) Personnel Injuries/Health Conditions (APPENDIX 4)
 - (b) Fire (APPENDIX 5)
 - (c) Chemical/Oil Spills and Releases (APPENDIX 6)
 - (d) Weather-related Emergencies (APPENDIX 7)


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- (e) Threats to the facility (APPENDIX 8)
- (f) Pandemics (APPENDIX 9)
- (g) Sabotage Reporting (APPENDIX 10)

8.0 Emergency Action Plan Annual Drill

It is the responsibility of the Site Leader to ensure an Emergency Action Plan Drill is held each year.


- 8.1 In addition to performing the drill, the Emergency Action Plan must be reviewed for accuracy. Make updates as required and forward revised plan to the Safety Specialist. Ensure site team has been trained on any changes.
- 8.2 For those sites using the Task Manager to manage repetitive tasks, schedule this drill to occur each April
- 8.3 For those sites using the Compliance Tracker to manage repetitive tasks, schedule the drill for each April
- 8.4 Each year's drill content will be determined by the site leader based on current needs
- 8.5 The type of annual drill (table top, full functional drill, etc.) will be determined by the site leader based on current needs, **BUT IT MUST INCLUDE A DOCUMENTED EVACUATION OF THE O&M / SERVICE BUILDING.**
- 8.6 A roster of drill attendees and date of drill will be filed with sites' Emergency Action Plan documents
- 8.7 Any gaps or action items that are a result of the drill will be identified, resolved, fully documented, and filed with the sites' Emergency Action Plan documents. Note that Work Management is to be used to document actual tasks to be completed to close gaps.

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APPENDIX 1

Immediate Site Evacuation Procedure

1. Personnel present in the Administrative Building shall immediately take the following actions:
 - (a) Locate and obtain the visitor/contractor sign-in sheet.
 - (b) Locate and obtain all immediately accessible hand-held radios.
 - (c) Gather in the Administrative Building as a group, and determine the safest muster area to proceed to, depending upon the known circumstances of the emergency (as indicated on Appendix 3).
NOTE: The primary muster area must be a predetermined location, with any alternate muster areas selected only when egress routes to the primary muster area are unsafe to proceed along.
 - (d) Pass the following information over the plant radio system:
 - 1) The muster area the employees will be proceeding to.
 - 2) Visitors/contractors known to be in the operating areas (as indicated by the visitor/contractor sign-in sheet).
 - (e) Once emergency personnel have completed the preceding steps, they shall immediately proceed to their designated muster area. Personnel in the Administrative Building should not delay in evacuating, or wait on other personnel that they anticipate may arrive.
 - (f) Upon arriving at the designated muster area, the group shall designate a Person-in-Charge and take a head count of all personnel who are at the muster area, including contractors and visitors.
 - (g) After a roll call of all personnel present at the muster area is taken, the Person-in-Charge shall identify which operating area personnel are not accounted for. The Person-in-Charge will then query by radio for personnel who are unaccounted for. The Person-in-Charge shall then establish radio communication with the Emergency Coordinator (if applicable) and relay information on personnel who are unaccounted for.
 - (h) All personnel at the muster location shall remain at the muster location until an “ALL CLEAR” signal is sounded, or if directed by the Emergency Coordinator (if applicable) to leave the muster location. The “ALL CLEAR” signal will be communicated by Radio or cellular telephone.
 - (i) The Person-in-Charge shall continuously monitor the plant radio system when at the muster location.
2. Personnel present in the facility operating areas (other than Administrative Building) shall immediately perform the following actions:

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- (a) If not monitoring the plant radio system, immediately turn on hand-held radios.
 - (b) Proceed to the designated muster area, unless the egress route to the muster area is not safe for travel. In such a case, proceed to an alternate muster area.
 - (c) Instruct any personnel (including visitors and contractors) who are seen along the way to proceed to the designated muster area.
 - (d) Upon reaching the appropriate muster area, report to the Person-in-Charge and continue to monitor the plant radio system. If no other personnel are present at the muster area upon arrival, communicate to the Site/Plant Leader that no other personnel are present in the area.
3. Personnel not in the operating areas of the plant (to include the administration building and parking areas) shall immediately perform the following actions:
- (a) Locate and obtain all immediately accessible hand-held radios.
 - (b) Proceed to the designated muster area.
 - (c) A Person-in-Charge shall be designated for the muster area. In many cases, this will be the Emergency Coordinator. The Person-in-Charge shall establish radio communications with operating area personnel and compare roll call lists to determine if any personnel are unaccounted for in the facility.
 - (d) If the Emergency Coordinator is not present at the muster area, the Person-in-Charge at the muster area will coordinate outside responding agency activities until the Emergency Coordinator arrives. In the event that the Emergency Coordinator is in plant operating areas or has proceeded to the alternate muster area, he/she may elect to designate the muster area Person-in-Charge to act in the capacity of Emergency Coordinator during the emergency.
-


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APPENDIX 2

Delayed Site Evacuation Procedure


1. Personnel present in the Administrative Building shall immediately perform the following actions:
 - (a) Take necessary operating actions to place the facility in the most stable condition, based upon the type of emergency.
 - (b) Locate and obtain the visitor/contractor sign-in sheet
 - (c) Communicate names of visitors/contractors currently in the operating areas to outside operating personnel. Instruct outside operating personnel to locate and direct all visitors/contractors to proceed to the Administrative Building for egress instructions.
 - (d) When all visitors, contractors and non-essential operating personnel have been accounted for and are present in the Administrative Building, the Site/Plant Leader (or Emergency Coordinator, as appropriate) shall designate a trained person to escort all non-essential personnel to the designated muster area along the safest egress route.
 - (e) Notify the Emergency Coordinator and Production Staff of the current facility status, and evacuation details.
 - (f) Perform a controlled shutdown in accordance with appropriate procedures and directions from the Emergency Coordinator.
 - (g) Once the shutdown has been completed, all essential personnel shall gather in the Administrative Building and take roll call. When all essential operating personnel are present and accounted for, evacuation to the designated muster area shall be performed, unless the egress route is not safe for travel. In such a case, proceed to the alternate muster area.

2. Personnel present in the facility operating areas (other than Administrative Building) shall immediately perform the following actions:
 - (a) Continuously monitor the radio system for information and instructions.
 - (b) Perform immediate response actions, as appropriate, to place the facility in the most stable condition, based upon the type of emergency.
 - (c) Locate and direct non-essential personnel to proceed to the Administrative Building immediately.
 - (d) Perform facility shutdown instructions as directed by the Site Manager/Lead technician.
 - (e) Upon completion of shutdown, or upon direction by the Emergency Coordinator, proceed to the Administrative Building for instructions.

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3. Personnel not in the operating areas of the facility (to include the administration building and parking areas) shall immediately perform the following actions:
 - (a) Locate and obtain all immediately accessible hand-held radios.
 - (b) Proceed to the designated muster area (see Appendix 3).
 - (c) A Person-in-Charge shall be designated for the muster area. The Person-in-Charge shall establish radio communications with operating area personnel and compare roll call lists to determine if any personnel are unaccounted for in the facility.
 - (d) The Person-in-Charge at the designated muster area will coordinate outside responding agency activities and provide assistance (to include personnel, resources, and administrative functions) to the Administrative Building as directed by the Emergency Coordinator and/or Manager/Lead technician.

4. The Emergency Coordinator shall immediately perform the following actions:
 - (a) Proceed to the Administrative Building, or to the location on the facility most appropriate for directing response actions for the emergency.
 - (b) Coordinate actions related to the emergency and provide directions to muster area Persons-in-Charge.
 - (c) In the event that the emergency escalates in severity or immediate danger to personnel, direct immediate evacuation of all essential operating personnel involved in plant shutdown activities.

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APPENDIX 3

Designated Egress Routes and Muster Areas for Evacuations

TBD and site specific

NOTES:

1. The Designated Muster Area is the TBD
2. The Alternate Muster Area will at either of the sites TBD
3. The Designated Muster Area is the primary gathering point for personnel, and should be used during evacuations unless the emergency has rendered egress routes to the Muster Area unsafe for travel. The Alternate Muster Area is the alternate gathering point for such circumstances.

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APPENDIX 4

Personnel Injuries and Serious Health Conditions

The following sections provide basic guidelines for response actions to be taken in the event of emergencies related to personnel health. Although facility personnel should take the most aggressive response actions that are prudent in an emergency situation, the first and foremost action will be to call 911 to initiate the response of trained outside medical responders. To prepare facility personnel for such contingencies, it will be the facility policy that all operating personnel and as many other personnel as possible should be trained in CPR (Cardiopulmonary Resuscitation) and in the use of an AED (Automated External Defibrillator) if one is available. If present on site, the AED will be maintained at the facility at the designated location in the Administrative Building.

Basic First Response Actions

- Check for unresponsiveness. Unresponsiveness is when the person is unconscious and does not respond when you call their name or touch them.
- *If the person is unresponsive, immediately call 911 for outside medical assistance and ask other personnel to bring the AED to the scene.* Other personnel should assist with 911 notifications and expediting the delivery of the AED to the scene.
- Next check to see if the victim is breathing normally. If no signs of breathing are observed, the responder should initiate two rescue breaths into the victim. After the rescue breaths, a pulse should be checked for on neck. If a pulse is present, continue with recovery breathing, but do not initiate chest compressions.
- If no pulse is observed, complete CPR, with assisted breathing and chest compressions should be commenced.
- If CPR is being performed and the AED arrives to the scene, direct an assistant to begin setting up the AED for operation on the victim. CPR should be continued during the time that the AED is being set up.
- If the AED is placed into operation, remain near the victim and follow all AED instructions to ensure safety and proper victim monitoring. Maintain the victim with AED monitoring until trained medical responders arrive at the scene.
- If the victim is responsive, but shows signs of shock or has an obvious severe injury, call 911 immediately and take additional actions as described in the sections below.
- If the victim has obvious broken bones or is bleeding profusely or may have neck or spine injuries, *do not attempt to move the victim.* Make the victim as comfortable as possible, and apply pressure to mitigate areas of profuse bleeding until trained medical personnel arrive at the scene.
- Immobilize all injured parts of the victim.
- Prepare victim for transportation, if the victim can be safely moved.

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Physical Shock

Symptoms

- Pallid face.
- Cool and moist skin.
- Shallow and irregular breathing.
- Perspiration appearing on the victim's upper lip and forehead.
- Increased, but faint pulse rate.
- Nausea.
- Detached semi-conscious attitude towards what is occurring around him/her.

Treatment

- Request professional medical aid immediately.
- Remain with and attempt to calm the victim.

Electric Shock

Symptoms

- Pale bluish skin that is clammy and mottled in appearance.
- Unconsciousness. No indications that the victim is breathing.

Treatment

- Turn off electricity if possible.
- Call for professional medical assistance and an ambulance immediately.
- Remove electric contact from victim with non-conducting material.
- Perform CPR and call for an AED, if required.


Burns

Symptoms

- Deep red color; or
- Blisters; or
- Exposed flesh.

Treatment

- Cooled immediately if at all possible, and
- Free of any jewelry or metal if it is safe to remove it.
- Do not pull away clothing from burned skin tissue.
- Do not apply any ointment to burn area.
- Seek professional medical assistance as soon as possible.

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Heat Stroke

Symptoms

- Face will be red
- Face will be dry to the touch.
- The pulse will be extremely strong and fast.

Treatment

- Rapidly cooled or death can occur.
- Sponged with water.
- Fanned to allow evaporation to occur.
- Moved into a cool environment.


Heat Exhaustion

Symptoms

- Increased heart rate
- Exhaustion can follow.
- An impaired ability to think can exist.
- A lack of coordination may be present.
- Body temperature may be normal.
- Skin can be clammy.
- Weakness and dizziness may result.

Treatment

- Remove from the hot environment.
- Lay victim on their back with feet slightly elevated.

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APPENDIX 5

Fire Response Plan


[The diagram above will need to be site specific]

The XXXX PV Solar Energy Center has a Fire Prevention Plan that describes measures taken at the facility to prevent, minimize the severity of, and proactively prepare for the event of a fire emergency. However, in the event that a fire should occur at the facility, this Fire Response Plan describes the actions that should be taken by plant personnel. Safe and expedient response actions are essential to protect the health and safety of plant personnel and minimize damages to plant equipment and the surrounding environment.

1. Any person who discovers a fire in the facility should immediately make radio contact with the plant control room, and provide the following information:
 - (a) That a fire has been discovered.
 - (b) The location and source of the fire.
 - (c) Any injuries that have occurred
 - (d) The cause of the fire (if known)
 - (e) Actions he/she will be taking to extinguish the fire (if appropriate, in accordance with step 2 of this procedure).

NOTE: Notifying others of the emergency and getting trained responders on the way is the most important step in minimizing injuries to personnel and damage to equipment. However, in the event that the person discovering a fire would be significantly delayed in attempting to extinguish it in its incipient stage by first getting to a radio to report it, the priority would be to extinguish the fire in the incipient stage. Example: A fire commences in the immediate vicinity of a person who does not have immediate access to a plant radio. If the person can quickly extinguish the fire, he/she should do so first, then get to a radio to report the fire as soon as possible thereafter. If a fire progresses to, or is discovered in a state beyond the incipient stage, the ***immediate action is to notify others over the radio and get help.***

2. Any person discovering a fire in its incipient stage should take action as quickly as possible to extinguish the fire. In general, a fire should be considered to be in its incipient stage if it meets two primary criteria:
 - (a) The fire can be extinguished or controlled with a single portable fire extinguisher, and,

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- (b) The person discovering the fire perceives an adequate level of safety in attempting to extinguish the fire.
3. As long as the fire is in its incipient stage, as defined above, the person discovering the fire should utilize all appropriate and readily available fire extinguishing equipment to extinguish the fire. ***Fire-fighting efforts beyond the incipient stage will be performed by trained outside responders only.*** (Note: All plant personnel will be provided with initial and periodic refresher training on the types and locations of fire-fighting equipment at the facility. The *Fire Extinguisher Deployment Plot*, detailing the location of portable fire extinguishing equipment deployed at the facility, is provided at the end of this appendix. Additionally, the *Fire Protection System Plot* details locations of key fire hydrants near or on the facility.)
4. In response to the fire, the Site Manager/Lead technician will need to make the following determinations:
 - (a) The equipment or activities that need to be shutdown and/or ceased.
 - (b) If any automatic fire suppression systems were activated as a result of the fire, when to secure such systems.

APPENDIX 5A

Fire Response Plan

Fire Extinguisher Deployment Plot – Admin/Water Treatment Areas

Diagram to be site specific
 All Extinguishers are Dry Chemical Extinguishers
 Water supply for fire fighting provided by Tanker or on-site Tank

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APPENDIX 6

Chemical/Oil Spills and Releases


The spill or release of any chemical is a potentially serious event, and appropriate response actions must be taken to minimize health hazards to personnel, as well as potential impacts to the environment. It is the policy of the facility that plant personnel will not respond to spills/releases, but will instead call for trained outside responders to perform this function. For the purpose of clarification to plant personnel, the term “respond” in this context refers to actions taken to perform cleanup operations of spilled substances, and in some cases may even take the meaning of actually stopping the source of a spill. Taking basic response actions to a spill such as setting up barricades, placing containment media and stopping spills in situations such as the step 1 example below should not be construed to be acting in the role of a “responder”, as it is defined in OSHA HAZWOPER regulations.

The basic actions to be taken in response to a chemical spill or release are the following:

1. If the spill or release is the direct result of an operational action performed on the system from which the release has originated, the person who performed the action should attempt to stop the release (if possible) ***if it can be stopped without incurring additional personal exposure to the substance.*** An example of this might be the following:

Example: A person opens the drain valve on a line that results in an unexpected release. If the person can immediately stop the release by closing the valve, this action should be taken if no additional exposure to the chemical will occur by doing so.

2. The person discovering a spill/release should immediately move to a location that is a safe distance from the affected area, but still allows for observation of the affected area (if remaining within observation distance is safe under prevailing conditions; if in doubt, do not risk exposure – leave the area.).
3. The person discovering the spill should look for other personnel in the area, and warn them by any means available of the event that has occurred. The Manager/Lead technician should be notified immediately over the radio. Information provided should include all of the following that are known:
 - (a) What type of chemical has been spilled/released?
 - (b) The location(s) of the spill/release.
 - (c) If the source of the spill/release has been stopped
 - (d) If any injuries or chemical exposure has occurred to personnel.
 - (e) Boundaries describing the area of the spill.


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- (f) Whether or not the spill is contained.
- (g) Quantity released.
- (h) Environmental Impacts (water bodies, streams, ground, roadways)

4. Based upon the report from the person discovering the spill, the Manager/Lead technician shall evaluate whether the circumstances pose a threat to the surrounding community or the environment. ***If a threat is imposed to the community or environment, 911 should be notified immediately.*** The Site/Plant Leader shall also contact at least one of the following specialized emergency responders:


Organization	Expected Response Time	Contact Number
TBD	xx	XXX-XXX-XXXX

5. The Site Manager/Lead technician shall make a determination as to whether the spill/release is of a quantity that must be reported to agencies, and if so, which agencies to notify. To perform this step, the Site Manager/Lead technician shall use the Spill Prevention Control and Countermeasure Plan (SPCC). The Site/Plant Leader shall ensure that all required notifications are made.
6. While remaining at a safe distance from the spill/release, the person discovering the spill should locate and place temporary containment around the outer boundaries of the spill, and place absorbent mats over any plant drains that are near the location of the spill. ***This should be performed only if it is safe to do so without risking chemical exposure.***
7. The person discovering the spill should attempt to barricade, restrict access or otherwise mark off safe boundaries around the spill to avert others from inadvertently approaching the spill area. ***This should be performed only if it is safe to do so without risking chemical exposure.***
8. The person discovering the spill should remain at a safe distance from the source of the spill/release until additional assistance or instructions are received.
9. Unless the person discovering the spill has reported unsafe conditions for approach of the area, the Site/Plant Leader shall immediately proceed to the spill area to evaluate the severity of the incident. **NOTE: IF ANY PERSONNEL ARE DISCOVERED TO BE UNCONSCIOUS OR OTHERWISE INCAPACITATED UPON APPROACH TO THE SPILL SCENE, ALL PERSONNEL MUST IMMEDIATELY BACK AWAY TO A SAFE DISTANCE FROM THE UNKNOWN THREAT.**

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10. The Site Manager/Lead technician shall evaluate the adequacy of containment, barricades, and any other efforts that have been taken to prevent the spill from migrating to any additional areas or systems, and direct additional actions to be performed (unless it is deemed that any additional actions are unsafe to perform). The adequacy or need for PPE should also be assessed. Upon completing this assessment, the Site Manager/Lead technician shall notify/inform the Facility Emergency Coordinator of the status of the emergency.

11. Once the Site Manager/Lead technician (or Emergency Coordinator, as appropriate) has determined that adequate containment and barricading of the spill area exists, he/she shall ensure that an adequately trained observer remains positioned a safe distance from the scene to observe the status of the spill. This observer shall perform radio status checks a minimum of once every three minutes until outside responders arrive for cleanup/mitigation actions.

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APPENDIX 7

Weather-Related Emergencies

Natural emergencies considered in this procedure are associated with weather disturbances such as windstorms, flooding and severe thunderstorms. Flooding waters, lightning, high winds and heavy rains may be detrimental to the employees and or equipment and structures at the facility. Warnings about developing weather emergencies are issued by local radio stations or tracked by onsite weather systems. These warnings should provide adequate information of the approach of weather-related emergency conditions. The Manager/Lead technician at the facility has several means to monitor these weather-related emergencies. These include:


- Internet access to weather-related web-sites;
- AM/FM radio to monitor local news stations
- National Weather Service

When information is received that a severe weather or tornado watch has been issued for the facility area the following actions shall be taken:

1. The Site Manager/Lead technician should notify the General Manager.
2. The General Manager shall make a determination about whether or not the plant should be shut down due to the weather situation.
3. Personnel should seek indoor shelter in the plant Administrative Building, or other reinforced structure. Personnel should remain indoors if the severe weather is affecting the immediate area of the facility.

Severe Weather Preparatory Checklist

- ✓ Ensure all portable equipment is stored indoors.
- ✓ Ensure all compartment accessory doors are closed and latched for all gas turbine and steam turbine equipment modules.
- ✓ Ensure that switchgear, load center, and tower doors are closed and latched.
- ✓ Ensure that the Administrative building doors are closed and latched.
- ✓ Place all trashcans in locations not exposed to weather.
- ✓ Make a general housekeeping inspection and ensure that all loose objects and debris that could potentially become airborne are secured or inside.
- ✓ Ensure all radios are fully charged.
- ✓ Secure all Sea Train/CONEX Storage buildings.
- ✓ Ensure all personnel evacuate towers if lightning is in the area or if there are other unsafe conditions that warrant climbing to be unsafe.

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APPENDIX 8

Threats to the Facility


In the event that the site receives threatening correspondence either by phone or by other means of communications, the following actions should be performed immediately:

Actions by the person receiving the threat:

1. Gather as much information as possible from the person making the threat. If the threat is via written correspondence, place the correspondence in a location in which it will not be touched or otherwise disturbed until police can be contacted. If the threat is being made verbally (phone, or other), communicate and obtain information from the individual making the threat for as long as possible.
2. Inform the Site Manager/Lead technician and/or General Manager of the situation.

The Site Manager/Lead technician and/or General Manager may consider any or all of the following actions to take in response to the threat situation, depending upon the circumstances of the threat:


1. Order an evacuation of the facility.
2. Call 911 for Police or Fire Assistance.
3. Arrange for additional security personnel for the facility.
4. Direct plant personnel to commence a controlled shutdown of the facility.
5. Direct searches to be performed on vehicles entering the facility.

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APPENDIX 9

Pandemics

Refer to the PGD (Power Generation Division) Pandemic Plan.

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APPENDIX 10

Sabotage Reporting

1. Refer to PGD-All-PR-EMER 1207200751 NextEra Sabotage and Disturbance reporting (NERC CIP-001 and EOP-004). It is located in the Op Model > Production > Emergency > Standards
2. In Accordance With (IAW) NextEra Sabotage and Vandalism (NERC CIP-001 and EOP-004) Reporting procedure located on the E Web/Policies/procedures/security Contact the following:
 - a. Corporate Security at 561-694-5000
 - b. FPDC at 561-694-3600
 - c. Local law enforcement. If emergency dial 911.
3. Communicate the sabotage event to all on-site personnel.
4. Document / update the event in the Event Response Tracking System



**BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT
COMMISSION OF THE STATE OF CALIFORNIA
1516 NINTH STREET, SACRAMENTO, CA 95814
1-800-822-6228 – WWW.ENERGY.CA.GOV**

***BLYTHE SOLAR POWER PROJECT
AMENDMENT***

Docket No. 09-AFC-06C

**PROOF OF SERVICE
(Revised 6/12/2013)**

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- Docket Unit
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**OTHER ENERGY COMMISSION
PARTICIPANTS (LISTED FOR
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*After docketing, the Docket Unit
will provide a copy to the persons
listed below. Do not send copies
of documents to these persons
unless specifically directed to do
so.*

KAREN DOUGLAS
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Member

DAVID HOCHSCHILD
Commissioner and Associate
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Raoul Renaud
Hearing Adviser

Galen Lemei
Adviser to Presiding Member

Jennifer Nelson
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Kelly Foley
Adviser to Associate Member

Eileen Allen
Commissioners' Technical
Adviser for Facility Siting

DECLARATION OF SERVICE

I, Marie Fleming, declare that on June 17, 2013, I served and filed copies of the attached **NEXTERA BLYTHE SOLAR ENERGY CENTER LLC'S RESPONSE TO CEC STAFF DATA REQUEST SET 1 (1-19)**, dated, June, 2013. This document is accompanied by the most recent Proof of Service, which I copied from the web page for this project at: http://www.energy.ca.gov/sitingcases/blythe_solar/pv_amendment/index.html.

The document has been sent to the other persons on the Service List above in the following manner:

(Check one)

For service to all other parties and filing with the Docket Unit at the Energy Commission:

☐ I e-mailed the document to all e-mail addresses on the Service List above and personally delivered it or deposited it in the US mail with first class postage to those persons noted above as "hard copy required";
OR

☒ Instead of e-mailing the document, I personally delivered it or deposited it in the US mail with first class postage to all of the persons on the Service List for whom a mailing address is given.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct, and that I am over the age of 18 years.

Dated: June 17, 2013

